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ABSTRACT

This teaching guide, the second in a five-volume series (see note), concentrates on the CAP (Cognitive, Affective, and Psychomotor domains) approach for teachers to accomodate handicapped students in vocational classes, particularly business and office education. The first three chapters are designed to (1) acquaint instructors with student disabilities as viewed in terms of area of dysfunction, whether cognitive, affective, or psychomotor: (2) offer teaching strategies that accomodate or alleviate the effects of various dysfunctions: and (3) suggest formal and informal assessment procedures and offer a worksheet approach to coping with student assessment. Chapter 4 furnishes a brief discussion of prescriptive planning and program modification. Chapter 5 provides exemplary curriculum modification and teaching methods in the "telephone usage" area of business and office occupations education. It includes suggested activities and learning outcomes, and techniques for teaching telephone usage to students with dysfunctions. The thirty-page appendix discusses teaching strategies for the emotionally disturbed. (CP)

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THE CAP APPROACH TO MODIFYING VOCATIONAL PROGRAMS FOR HANDICAPPED STUDENTS

VOL. 2 BUSINESS/OFFICE WITH AN EXAMPLE IN TELEPHONE USAGE

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PREFACE

This is one in a series of five reports in which the Cognitive, Affective and Psychomotor (*CAP*) approach (i.e., a functional approach as opposed to a labeling one) is emphasized in describing disabilities and teaching strategies for students enrolled in Vocational, Technical and Adult Education (VTAE) Districts. The report takes the view that before an educational plan (prescription) can be suggested for students, they need to be assessed by formal or informal means to determine 1) if students are dysfunctional in one or more of the *CAP* areas, 2) what limitations (if any) exist, and 3) what instructional strategies can be instituted to overcome or, at least, alleviate the handicapping condition.

While teaching strategies are suggested throughout the report, Chapter V provides exemplary curriculum modification and teaching methods in one small area within the Business and Office Occupations Division viz., "Telephone Usage."

It is hoped that the contents of this report will serve to better prepare and motivate those members of the educational community, who are charged with preparing students with special needs for the world of work in the Business and Office Occupations area, to become better acquainted with the instructional strategies that can be employed to alleviate the needs of those "special" students.

ACKNOWLEDGEMENTS

The writer wishes to acknowledge that materials developed and/or compiled by professional staff members of the Handicapped Projects Area, Wisconsin Vocational Studies Center, University of Wisconsin-Madison, have been incorporated in this report, as were ideas from the report "Telephone Usage Program" developed by Lynn Behm.

The exemplary student prescriptions and curriculum modifications included in the Appendix are the efforts of participants at the conference on "Modifying Vocational Programs for Handicapped Students," conducted by the Wisconsin Vocational Studies Center on February 15-16, 1979 at the University Bay Center. The responses from vocational educators attending the Business and Office Occupations section are hereby acknowledged.

The fine work by Liz Carlson and Jeff Hamm in developing and producing the audio/visual material "Atypical Teaching: Office Phone Usage" - which is intended to serve as an integral part of this report - is also gratefully acknowledged.

The consultant services of Carol Troeller, Teacher/Coordinator of Business Education at the Racine campus of Gateway VTAE District, are appreciated.

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CHAPTER I

DISABILITIES BY AREA OF DYSFUNCTION

Introduction

Handicapped persons are entering the labor market in greater numbers than ever before. This is due, in part, to handicapped persons' insistence on leading independent and productive lives and, in part, to the awakening by the public of their worth in the society. In order to facilitate the transition from dependence to independence and from the ranks of the unskilled to the skilled, educational institutions are establishing and/or modifying, in greater numbers, academic and vocational programs that satisfy the training needs of this special population.

Schools are cognizant of the deficits in learning that a handicapped person may experience. Awareness on the part of the public and provisions in federal law requiring the least restrictive alternative in educating handicapped students serve as the impetus to school officials to establish and/or improve instruction for handicapped students. One practice that is receiving wider acceptance is mainstreaming whereby the student is placed in a regular classroom and where adjustments are made for the handicapping condition. While more and more instructors familiarize themselves with the characteristics and needs of handicapped students, others do not. Many teachers do not feel comfortable nor competent in teaching handicapped students who may be in their classes. In many cases they do not know how to do so. This module, therefore, is designed for instructors in general and those in business and office occupations, in particular, to become

aware of the characteristics of handicapping conditions and the instructional methods that they may employ in teaching these individuals.

Disabilities By Area of Dysfunction

Before teaching strategies are presented, it might be profitable to briefly describe the various disabilities that students can have and teachers may encounter. For those teachers who are already familiar with handicapping conditions, this description may serve as a review; for those who are not, it can serve as the source of new information.

Describing a student by his/her handicapping condition presents a negative image of that student. Accordingly, all handicaps are grouped into three areas of dysfunction, namely, cognitive, affective, and psychomotor dysfunctional areas. Students who are dysfunctional in the cognitive domain are usually mentally retarded or have learning disabilities, while those with affective dysfunction may have problems of depression, motivation, interpersonal skills, self esteem and drug side-effects. Students with problems in the psychomotor domain may have speech, visual, auditory, health or orthopedic problems or epilepsy and/or cerebral palsy.

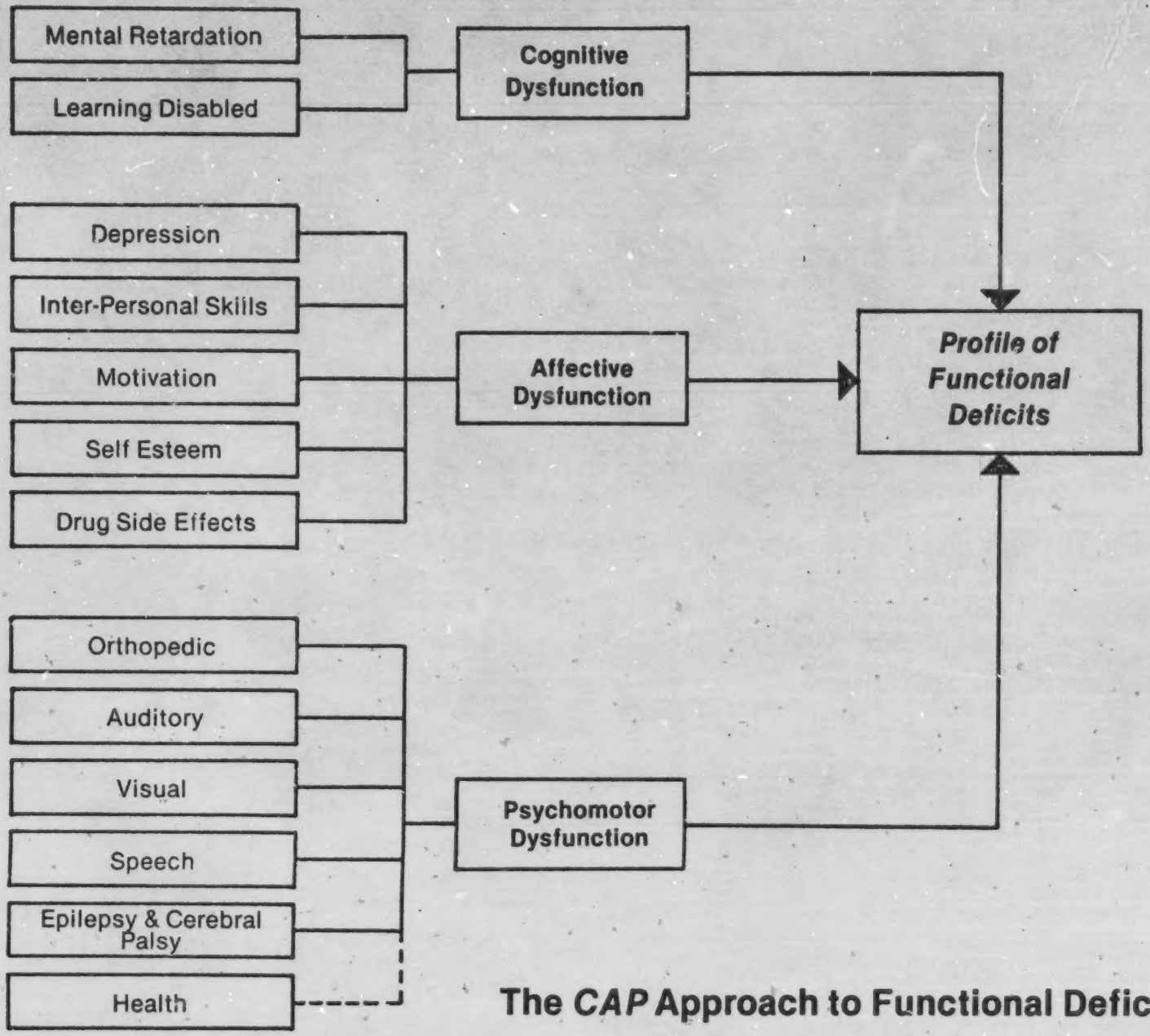
Categorizing disabilities by one of the three areas of dysfunction rather than individual handicaps has two advantages. First, handicapped students can rarely be categorized by a single disability; accordingly, instructional techniques must take the multiple aspects of handicaps into consideration. The second advantage of categorizing students by area of dysfunction rather than individual disability allows the teacher to employ educational strategies which could be used to provide services to a broad range of handicapped students. Therefore, when disabilities are referred to as deficits in functional areas (i.e., the cognitive, affective and

psychomotor domains), not only is labeling discouraged, but the positive aspects of the individual is enhanced and (s)he is viewed as a total person. Figure I provides a schematic of the *CAP* approach.

Cognitive Dysfunction

Those persons who are mentally retarded or learning disabled experience deficits in the cognitive domain. The first of these, mental retardation, refers to "significantly sub-average general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period," according to the 1973 definition by the American Association on Mental Deficiency. Four categories of mental retardation are generally recognized. Persons who are mildly retarded have an IQ of 55 to 69 with retardation occurring mainly because of environmental (that is, culture or family) reasons although minimal brain damage and other medical factors, where damage is not severe, can contribute to the level of dysfunction. For the individual who is mildly retarded, adequate social, vocational and communications skills can be developed. An individual with an IQ of between 40-54 is judged to be moderately retarded. In this case, retardation occurs mainly because of medical causes. While these individuals cannot function at the level of the mildly retarded, they can, however, learn to talk and communicate, but do have problems in social awareness. Where retardation is severe, that is, IQ of between 23-53, the disability emanates from medical causes and is accompanied by poor motor development. For the severely retarded, learning elementary speech and health habits is possible, however, functional academic skills are not. Profound retardation occurs in persons with an IQ of between 0-24. In these cases, the cause of retardation is medical and results in extreme mental

FIGURE 1



The *CAP* Approach to Functional Deficits

The *CAP* Approach to Functional Deficits

Cognitive Dysfunction

MENTAL RETARDATION

Mental retardation refers to significantly sub-average general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during the developmental period (American Association on Mental Deficiency, 1973).

Mild - IQ 55-69. Retardation occurs mainly because of environmental (culture, family) reasons although minimal brain damage and other medical factors (where damage is not severe) can contribute to the level of dysfunctions. Adequate social and communication skills can be developed.

Moderate - IQ 40-54. Retardation occurs mainly because of medical causes. Can learn to talk and communicate but have problems in social awareness.

Severe - IQ 24-39. Retardation occurs because of medical causes. It is accompanied by poor motor development. Learning elementary speech and health habits is possible; functional academic skills are not.

Profound - IQ 0-23. Cause of retardation is medical resulting in extreme physical and mental deficiencies. Frequently institutionalized for activities of daily living.

LEARNING DISABLED

Disorders in one or more of the psychological processes involved in the understanding or using of the spoken or written language. Disorders may occur in listening, talking, reading, writing, spelling, or doing mathematics and may be perceptual handicaps, brain injuries, brain dysfunctions, dyslexia, or developmental aphasia.

Affective Dysfunction

DEPRESSION

Depression is a mental disorder characterized by little emotion, sadness, slow mental and physical activity, fatigue, despondency, feelings of worthlessness and dejection. Students suffering from depression may show any combination of these symptoms in the classroom.

INTERPERSONAL SKILLS

Students who have learned inappropriate ways of dealing with other individuals frequently show the following behaviors: difficulty in dealing with criticism, disruption, manipulation, difficulty in working in group situations, and unwillingness to conform to rules and regulations. These behavioral problems can be overcome by instilling proper interpersonal skills.

MOTIVATION

A student's motivation may be considered factors which drive him/her, thereby stimulating him/her to perform thus affecting the intensity and persistence of that effort. Problems of motivation may be manifested in attendance and punctuality problems, erratic performances generally well below the students' capabilities, a high rate of distractibility, a negative or irresponsible attitude towards work, little concern over performance and much time and effort spent in unconstructive ways.

SELF ESTEEM

Self esteem can be described as the extent to which an individual feels good about him/herself. Students with low self esteem usually question their worth or values as human beings, tend to be negative and anxious, lack self-confidence, are failure oriented, unassertive and have low performance standards and vocational goals.

DRUG SIDE-EFFECTS

Many people find themselves in situations in which they are bored, frustrated, lonely and face excessive stress. Drugs can be prescribed to counteract these moods but these drugs have side-effects that affects a student's performance. Common examples of drug side-effects are drowsiness, blurred or double vision, nausea, memory impairment, coordination difficulties, confusion, dizziness, hyperactivity and thirst. These problems can be alleviated by prescribing smaller dosage or alternative medications for the student.

Psychomotor Dysfunction

ORTHOPEDIC

The orthopedically impaired person is one who has a crippling impairment which interferes with the normal functioning of bones, joints, and muscles to such an extent that special arrangements must be made by the school. Individuals who are victims of polio, arthritis, and muscular dystrophy fall into this category.

AUDITORY

Persons with auditory handicaps may have difficulty in hearing in one or both ears or may not hear at all. Hard of hearing persons are classified as having slight, mild, or marked losses and are educated through the auditory channel after compensation is made for hearing loss. Deaf persons are classified as those with severe losses and are educated primarily through sense modalities other than the ear.

VISUAL

Vision impaired persons are classified for educational purposes into two categories - the visual impaired who can read print and the blind who can learn to read braille.

SPEECH

Speech defects can be grouped to include disorders of articulation and voice, stuttering, and speech disorders associated with hearing loss, cleft palate, mental retardation and cerebral palsy. Speech clinicians can deal with speech, language problems and related communication disorders.

EPILEPSY AND CEREBRAL PALSY

Epilepsy and cerebral palsy directly proceed from brain activity. Epilepsy is a neurological condition caused by abnormal discharges to the brain resulting in one of four kinds of seizures: Grand Mal, petit mal, Jacksonian and Psychomotor. Cerebral palsy, caused by damage to the brain during or shortly after birth, results in ineffective control of muscles by the brain, thus restricting a person's motor activities.

HEALTH

Health impaired persons are those with special health problems e.g. rheumatic fever, congenital heart defect, diabetes, respiratory disorders (cystic fibrosis, asthma, tuberculosis) and hemophilia. These health impairments, though not strictly psychomotor in nature, do restrict a students' movements and activities in the classroom.

and physical deficiencies. These individuals are usually institutionalized because they have poor learning skills.

A person who is learning disabled also falls within the cognitive domain. Learning disability is a disorder in one or more of the psychological processes involved in understanding or using spoken or written language. Disorders may occur in listening, talking, reading, writing, speliing and doing math. Several indicators may mean the presence of a learning disability. For example, in reading, a person may confuse letters or words, reverse letters or words, skip or reread portions, vocalize while reading silently, read slowly, use fingers more frequently or have poor reading comprehension. The individual may also write or print poorly and, in general, have poor body coordination. His/her emotional and physical behavior may also indicate the presence of a learning disability manifesting itself in inattentiveness, day-dreaming, aggressiveness and temper flair-ups among others. In overcoming the problems of the learning disabled, a teacher should be able to diagnose the medium by which the student learns best since the student may experience difficulty in learning unless information is presented in a way (orally, visually or tangibly) compatible with the student's most effective learning channel.

Affective Dysfunction

Depresssion, interpersonal relations problems, motivation, self-esteem and side-effects of drugs are classified as affective dysfunction. (Many individuals with this dysfunction are said to be emotionally disturbed.) The first of these, depression, is a mental disorder characterized by little emotion, sadness, slow mental and physical activity, fatigue, despondency, feelings of worthlessness and dejection. Students suffering from depression may show any combination of these symptoms in the classroom. They

tend to exert little energy or show enthusiasm towards classroom assignments in particular or the course in general; are unconcerned about their unkempt personal appearance, performance and passive role in group activities in the classroom; and are plagued by attendance and punctuality problems.

Students who have learned inappropriate ways of dealing with other individuals frequently show the following behaviors: difficulty in dealing with criticism, difficulty in working in group situations, unwillingness to conform to rules and regulations, they are also disruptive and manipulative. These behavioral problems can be overcome by instilling proper interpersonal skills. In some cases inappropriate behavior may be caused by underlying emotional problems. This may be evident in cases in which a student may require excessive assistance, due to the lack of self-esteem, when attempting new tasks.

Hundreds of everyday words refer to motivation or an individual's motives, examples being: wants, desires, strivings, needs, goals, aspirations, drives, wishes, aims, ambitions and hungers. Essentially, a student's motivation may be considered to be factors which drive him/her thus stimulating him/her to perform, thereby affecting the intensity and persistence of that effort. While most students perform well in class, a student lacking in motivation may not. Problems of motivation may be manifested in attendance and punctuality problems, erratic performances generally well below the student's capacities, a high rate of distractability, a negative or irresponsible attitude towards work, little concern over performance and much time and energy spent in unconstructive ways. If a student is not motivated, a conference with the teacher may reveal that the student has not formulated any vocational goals and is questioning his/her

involvement in the program. If this is determined, the teacher might be able to 1) supply information to the student regarding employment possibilities after graduation and 2) suggest that the student visit the guidance department to a) talk with counselors, b) review occupational information material and c) take vocational interest tests.

Self-esteem can be described as the extent to which an individual feels good about himself/herself. Students with high self-esteem tend to be confident, assertive, optimistic, persistent when attempting new tasks and relatively free of anxiety. A student with low esteem, however, usually questions his/her worth or value as a human being, tends to be negative and anxious, lacks self confidence, is failure-oriented, is unassertive, has low performance standards and vocational goals and is easily frustrated when attempting new tasks. These characteristics may become evident if the student frequently seeks teacher assistance, a practice that may indicate poor self-esteem.

Many people find themselves in situations in which they are bored, frustrated, lonely or facing excessive stress. Over-the-counter or prescription drugs (for example, barbiturates, sedatives, tranquilizers, antidepressants and amphetamines) are used to counteract these moods. These drugs influence an individual's behavior by acting on his/her central nervous system, thereby, alleviating the situation of boredom, loneliness, frustration and stress. However, these drugs may have side-effects which can also affect a student's performance. Common examples of drug side-effects are drowsiness, blurred or double vision, nausea, memory impairment, coordination difficulties, confusion, dizziness, hyperactivity and thirst.

Affective dysfunction, then, is made up by the disabilities described in this section, and can be overcome if the problem is recognized and

appropriate strategies are implemented. Because affective disabilities are not as visible as psychomotor disabilities and are more ambiguous than cognitive ones, attending to them requires special skills. The teacher may, therefore, involve colleagues, counselors and other professionals in the mental health field.

Psychomotor Dysfunction

Many disabilities fall under the psychomotor domain. Many are easily recognizable; others, like those that fall within the cognitive and affective domains, are not. Disabilities that fall under the psychomotor domain are orthopedic, auditory, visual, speech and health. Epilepsy and cerebral palsy also fall in the psychomotor domain, but unlike the other psychomotor disabilities, these dysfunctions directly proceed from brain activity.

The first of these disabilities is orthopedic. The orthopedically impaired person is one who has a crippling impairment which interferes with the normal functions of bones, joints or muscles to such an extent that special arrangements must be made by the school. Individuals who are victims of polio, arthritis and muscular dystrophy fall into this category. Polio, also called poliomyelitis or infantile paralysis, is an acute infectious disease characterized by motor paralysis which severely restricts movement. Arthritis is inflammation of the joints and may be so severe that a student cannot continue in a regular classroom. Muscular dystrophy is a general term for a group of neuro-muscular diseases. With muscular dystrophy there is progressive weakening and wasting of the skeletal and voluntary muscles. However, while the muscles of the person with muscular dystrophy may deteriorate rapidly, the disease does not hinder the person intellectually.

The second disability is auditory. Persons with auditory handicaps may have difficulty hearing in one or both ears or may not hear at all. Hard of hearing persons are classified as those with slight, mild or marked losses and are educated through the auditory channel after compensation is made for the hearing loss. Deaf persons are classified as those with severe losses and are educated primarily through sense modalities other than the ear.

The third disability is visual impairment. Vision impaired persons are classified for educational purposes into two categories: a) the visually impaired who can read print and b) the blind who can learn to read braille. There is little differentiation between the education content for sighted persons and those with visual impairment. The major difference is in the instructional mode to compensate for sight loss.

The fourth impairment is speech. Speech defects can be grouped to include 1) disorders of articulation and voice, 2) stuttering and 3) speech disorders associated with hearing loss, cleft palate, mental retardation and cerebral palsy. For a large number of persons with this defect speech clinicians deal with speech, language problems and related communication disorders.

The first of the two disabilities that directly proceed from brain activity is epilepsy. Epilepsy is a neurological condition caused by abnormal discharges of energy to the brain. When this happens the brain cannot function properly and thus loses control over the muscles of the body, consciousness or senses and, in some cases, even thoughts. Two myths about epilepsy that can be discarded are that: 1) epilepsy is a curse (it is not); and 2) epilepsy is hereditary (it is not). Rather, epilepsy is a result of brain damage.

Four types of epilepsy have been identified. They are grand mal, petit mal, Jacksonian and psychomotor.

a. Grand mal - This seizure (i.e., a condition in which a person passes into a clouded dream-like consciousness or loses consciousness) is most frequently observed and accompanied by convulsions (i.e., an abnormal, violent and involuntary contraction or series of contractions of the muscles). An aura (sights, sounds or smells) may serve as a warning of an impending seizure and may precede the seizure.

b. Petit mal - involves a momentary loss of consciousness and is observed as a nod of the head, blinking of the eyes, a vacant stare, the loss of a grasp or the dropping of an object. In the petit mal attack there is no aura, cry or convulsion, and the attack begins and ends suddenly.

c. Jacksonian - this is a type of focal seizure usually starting with the jerking movement of the hand, foot or one side of the face. If it involves the entire body, it ends in a grand mal attack.

d. Psychomotor - this type of seizure is characterized by automatic trancelike behavior. The person may sit motionless, chew, mumble, scream, run around, tear off clothes or may become violently active and throw things.

If a student is placed in a regular classroom, teachers should be aware that (s)he has epilepsy. They should know the type of seizure, what to do should a seizure occur and first aid to be rendered for the seizure. The teacher should also be aware of the type of medication used and its possible side effects.

The second disability resulting from brain activity is cerebral palsy. Cerebral palsy is caused by damage to the brain during or shortly after birth. Thus, the brain is unable to effectively control muscles, thereby, restricting a person's motor activites.

The last disability is health impairment. Health impaired persons are those with special health problems, e.g., rheumatic fever, congenital heart defect, diabetes, respiratory disorders and hemophilia. While health impairment is not strictly psychomotor, it does limit a person's

movement and activities in the classroom and, thus, lends itself to an alignment with psychomotor dysfunction rather than cognitive and affective dysfunctions. Those individuals with health impairments, therefore, experience a weakened physical condition which renders them relatively inactive and requires special attention on the part of schools.

Individuals with rheumatic fever, heart defect and diabetes usually do not require special conditions while in the classroom, however, the teacher should be aware of these problems and should be able to follow physicians' recommendations.

Cystic fibrosis, asthma and tuberculosis make up the three respiratory disorders. Cystic fibrosis is a hereditory disorder in which secretions of mucus in the lungs and pancreas are abnormal. Normal mucus is thin and slippery and helps in keeping the lungs and air passages clear. The abnormal, thick, sticky mucus of cystic fibrosis may clog the small bronchial tubes in the lungs and interfere with lung function. It may also block the flow of digestive enzymes from the pancreas to the small intestines, thus, interfering with digestion of food. Some precautions need to be taken for students having cystic fibrosis. The classroom in which such students are placed should be an environment relatively free of dust and fumes, since dust and fumes may irritate the breathing passages and induce coughing. Also, students should not be exposed to extremes in temperature since this may result in heat exhaustion; nor should they be involved in, or required to perform, heavy physical tasks. The same precautions taken for students with cystic fibrosis can also be taken for individuals with asthma. Persons with tuberculosis, however, can be treated quickly and effectively so that they can return to a regular classroom situation.

Hemophilia, the last of the health disabilities, is a hereditary blood defect that results in difficulty in controlling hemorrhage. For obvious reasons hemophilia victims tend to have poor attendance records.

The disabilities described above and illustrated in Figure 1, were grouped under one of three areas of dysfunction viz. cognitive, affective and psychomotor *(CAP)* dysfunctions. Likewise, instructional strategies that follow are presented from the perspective of functional deficits rather than individual disabilities. These strategies are described in Chapter II.

CHAPTER II

TEACHING STRATEGIES FOR *CAP* DYSFUNCTIONS

Introduction

A search of the literature shows that teaching strategies for individual disabilities have been developed. An examination of these strategies reveals that similar instructional methods can be applied both within and between functional areas. For example, similar instructional strategies can be used for students who have deficits in the cognitive domain who are either mentally retarded or learning disabled. Similarly, these strategies can be used for students who have deficits in, say, the affective and psychomotor domains. Because similar teaching strategies can be used for individual disabilities that fall within the three dysfunctional areas, the instructional methods that follow are organized by cognitive, affective and psychomotor areas of functioning rather than by individual disabilities.

Strategies for Cognitive Dysfunction

As described earlier, an individual who has problems in the cognitive domain may have problems in the instructional setting, in perceiving, recognizing, conceiving, judging and reasoning. Individuals who perform poorly in cognitive operations may have difficulty in accurately perceiving input from the visual, auditory, tactile and kinesthetic modes. Even when these sensory inputs are received accurately, the student may have problems integrating or processing these perceptions into a coherent pattern of meaning.

It may be that the individual has problems when information is visually presented. Then again, difficulty may be experienced in receiving and processing verbal input. Or, the student may have problems in comprehending sensory stimulation presented simultaneously in several formats.

Expression of perceptions and ideas may also cause difficulty for some students. Some can express themselves very well verbally but not in written form. Some can express themselves in written form but not verbally. Still others can do neither very well.

Deficits in the cognitive domain may result in the individual having problems in short or long term memory. The difficulty may be in recognizing or recalling information. The student may also be unable to generalize from one situation to other similar ones or deduce information from a general situation. In addition, (s)he may be unable to anticipate the consequences of certain acts, apply situations or conditions for a desired outcome or use facts or concepts in evaluating a given situation.

In applying these cognitive deficits to the academic setting, problems are frequently presented to both the teacher and the handicapped student. This problem may be due to 1) the format in which directions are presented (i.e., via visual, verbal and/or demonstration mode), 2) the complexity of the directions given, 3) the level of abstractness at which the directions are presented or 4) the degree of specificity, generality or ambiguity exhibited by the directions. Then again, the problem may be due to lack of practice in analyzing directions and comprehending their implications for behavior and performance. Or, it may be difficulty in solving problems, a skill that is sadly lacking in handicapped and non-handicapped students alike. It may be that the student is unable to synthesize information and distinguish the important from the trivial or irrelevant. Additionally,

the student may have poor study skills or may have low level reading and writing skills, low level math skills, poor observation skills and overall slowness in accomplishing tasks and learning new material--high level skills in these areas are usually absent in individuals with a history of failure in academic subjects.

Described below are specific teaching strategies that may be utilized with students having cognitive problems.

A. If a student (whether handicapped or non-handicapped, whether (s)he has deficits in the cognitive, affective or psychomotor domain) has problems following directions, the following strategies may be used:

   1) Use the same words for the same directions
   2) Teach different forms of the same directions
   3) Use a list format for written directions instead of a paragraph format
   4) Have the student demonstrate that (s)he knows what you expect

B. If the problem exhibited is poor observation skills, the following strategies may be used:

   1) Point out significant details, similarities and differences
   2) Present examples of poor, acceptable and excellent work
   3) Have students practice appropriate discriminations
   4) Relate variations in a sequence to specific conditions demanding those changes

C. If the difficulty is in analyzing problems and impulsive responses, it might be profitable to demonstrate techniques of analyzing and choosing from among possible solutions. It would be a great help to provide clues, spaced practice and a review of problem-solving skills.

D. Frequent review of material already presented and spaced practice of new learning, rather than practice during a longer block of time, would help the student in overcoming poor long-term memory. Skills and knowledge presented earlier, as well as new learning, should be taught in such a way that the skills and knowledge can be transferred to job situations and conditions. It should not be assumed that the student is skilled at making these generalizations independently.

E. If the problem is in problem-solving skills, the following steps may be followed to overcome the problem:

   1) Describe and define the problem
   2) Break it down into its component parts
   3) Select the possible alternatives

4) Weigh the pros and cons of each alternative according to specific criteria (determination of just what criteria to use might be a preliminary part of this step in the process)
5) Eliminate alternatives which are obviously not feasible
6) Reanalyze remaining alternatives
7) Choose a tentative course of action
8) Implement that action
9) Evaluate the effectiveness of the solution
10) Revise as the situation indicates

Strategies for Affective Dysfunction

Students who have poor self-esteem, have poor interpersonal skills, are not motivated, are depressed and suffer from side effects of drugs are emotionally disturbed or dysfunctional in the affective domain. In the classroom, however, if the presence of an affective disability is indicated, it is important to consider the intensity and the duration of the problem as well as possible causes. For example, if symptoms of depression (little emotion, little enthusiasm, slow mannerisms, fatigue) are observed, they may be acute but short-lived. On the other hand, another student may show similar symptoms which are more severe and may last much longer. In the latter case, some form of intervention may be needed. Teaching strategies that can be used for persons with affective disabilities are summarized below. Specific methods that can be used for specific problems, i.e., depression, motivation, interpersonal skills, self-esteem and the side effects of drugs, are found in Appendix A.

It is important for the teacher to determine the specific problem areas that result in below-level functioning of the student in the classroom. For new students, special testing may be required to determine if they have, not only affective, but cognitive and psychomotor disabilities as well. For students who have been in the classroom for some time, however, classroom performance and behavior should be observed for consistency. If

the student is not enthused about classroom assignments, is unconcerned about his/her performance or shows a general lack of emotion in classroom activities, that student may be suffering from depression. In this instance, the student's perception of the problem is important. In any case, if the teacher is unable to help the student overcome his/her depression, (s)he should be encouraged to seek professional help so that his/her general mental health may be improved.

If a student is disruptive or manipulative, has difficulty in working in group situations or is unwilling to conform to rules and regulations, (s)he may have poor interpersonal skills. In a student/teacher conference, the teacher should specify what improvements the student needs to make. Thus, before the student leaves the meeting, (s)he should know exactly what is expected of him/her and the possible ramifications for not conforming to the rules.

If the student is not motivated to do classroom assignments, the problem may be that the student is unable to relate classroom assignments to employment opportunities. If this were the case, the student should be shown the relevancy of school work and future employment goals. It may also be that the student does not feel that (s)he is making any progress in school, in which case instruction should be so organized that the student is able to see progress.

Because the student with low self-esteem (a) questions his/her worth or value as a human being, (b) has a tendency to be negative, (c) lacks confidence and (d) is failure-oriented, it is necessary to provide him/her with a series of successful experiences rather than experiences that may end in failure. Like students with poor motivation, students with low self-esteem need to see their worth. In this regard, teachers should

acknowledge tasks that the student has done very well and, at times, use the student's work for special mention during class. Another strong reinforcer is to have the student with low self-esteem instruct students in tasks that (s)he, but not other class members, has mastered.

Side effects of legal drugs can have negative effect on a student's performance in class. As stated earlier, these side effects can result in drowsiness, blurred or double vision, nausea, memory impairment, coordination difficulties, dizziness or nervousness. In many cases, the drug that the student is taking is being administered by a trained professional. In this situation, the teacher should not suggest that the student discontinue its use. Rather, the teacher may want to suggest that the student consult with his/her physician, since it is possible that the side effects may be eliminated if the physician makes alterations in drug usage. In any case, it would be extremely helpful to the physician for both teacher and student to specify exactly the problem observed in the classroom that affects the student's performance. In addition to the above-stated techniques for countering the side effects of drugs, others that may be used include the teacher being consistent in providing cues, praise, or warning of difficult situations; asking, not commanding; listening; providing a step by step approach to meeting student's goal; and modeling the desired behavior.

If it is determined that the student is using illegal drugs or misusing legal ones, (s)he should be encouraged to seek help from his/her guidance counselor, drug information center and/or physician since the use of the drug may be symptomatic of other serious affective disabilities. The likelihood of this situation should, at least, be evaluated by a trained professional.

Strategies for Psychomotor Dysfunction

Unless accompanied by disabilities in other areas, cognitive dysfunction for example, individuals with psychomotor dysfunction have problems with mobility and dexterity and in one or more of the senses of hearing, sight, touch and speech. Generally, students with psychomotor disabilities can be taught the same material taught to other students in the classroom. The major difference is in (1) the mode in which instruction is carried out and (2) the modification in facilities and in equipment for the orthopedically impaired that is required.

Special precautions need to be taken for the orthopedically impaired. Students with respiratory or other health impairments require special consideration, especially as it relates to the classroom environment. Students who have certain orthopedic impairments (polio; arthritis; muscular dystrophy; or health impairments like hemophilia, diabetes, congenital heart defect, cystic fibrosis, asthma and tuberculosis) may be plagued by frequent absence. In these cases, homebound instruction is required to augment spotty class attendance.

For students with deficits in hearing, sight, touch or speech, instruction in a mode that does not require use of that faculty is required. However, all students including those who do not have defects in seeing or hearing may benefit by classroom presentation in auditory, visual and/or kinesthetic modes, and, if appropriate, touch and olfactory contacts. In many cases, a combination of teaching modes may achieve even greater success in teaching all students--those with or without functional deficits.

There are some general strategies that can be used in the classroom for all handicapped students. They include the following:

1) React to the disabled student from a functional orientation; i.e., in terms of what (s)he can do, instead of anatomical orientation, i.e., stressing what is missing or dysfunctional

2) Set and implement realistic expectations. Avoid overestimating, overindulging, overprotecting or rejecting the student

3) Analyze student's specific learning problems (such as poor concentration, short attention span, distractibility, poor hand-eye coordination, perceptual difficulty, motor skill deficiency, language problems or difficulty in conceptualization) and make appropriate adjustments

4) Build success experiences

5) Note competitive situations between the handicapped person and fellow students. (S)he should receive enough help to allow him/her an equal competitive opportunity, but not so much that other students develop resentment at this "unfair advantage." Too little help, on the other hand, breeds feelings of anxiety, breathlessness, bitterness and depression on the part of handicapped students

6) Accurately evaluate the person's performance and provide him/her with detailed feedback of his/her performance. Accurate feedback is essential to helping one improve his/her performance

The strategies described in this section should allow the teacher to be better prepared in identifying and using instructional techniques that could overcome some of the learning problems that a handicapped student faces in the classroom. While specific teaching methods can be found in the literature, strategies described above stress the functional rather than anatomical orientation of the student. In this way, when disabilities are referred to as deficits in functional areas (i.e., in the cognitive, affective and psychomotor domains), not only is labeling discouraged, but the positive aspects of the individual in enhanced and (s)he is viewed as a total person. These teaching methods tend to "accentuate the positive" aspects in educating that portion of the school population who can no longer be kept out of the educational mainstream.

It should be made clear that a person's disability is not necessarily all pervasive, i.e., only <u>certain</u> areas of personal action, expression or

interaction may be disabled, while other areas operate as well as anyone else's. This gives rise to the idea of individual differences. Individual differences can be differences in ability between people and differences in ability levels in various areas of functioning within any given person. The latter, i.e., the concept of intra-individual differences, can be used to organize educational programming for a particular handicapped person in conformity with his/her abilities and disabilities. The teacher should, therefore, find the learning world that is open to the student - whether it be "Auditory Avenue," "Vision Street," or "Tactile Lane," or whether a detour is required or an alternative route is necessitated because a road is closed. If "Vision Street" is open, then techniques that may be used include lined pictures, look-say flash cards, color and underlining. For the open "Auditory Avenue," tapes, reading by others, saying aloud what is being thought, slow reading and spelling audibly are required. Where "Tactile Lane" is open, hands-on activities are a great importance to augment learning.

One or more assessments may be required to determine which learning road is open to the student. Therefore, assessments similar to the ones described in Chapter III, should be regarded as an integral part of the instructional setting and a prerequisite to lesson planning.

CHAPTER III

ASSESSMENT PROCEDURES

Some disabilities are obvious, others are not. To determine the way a student, disabled or not, learns best requires some form of assessment. Two types of assessment can be made: formal and informal.

Formal Assessment

In formal assessment two kinds of data can be obtained namely, test and non-test data. As part of formal assessment, psychometric tests can play a large role in examining the general intellectual level of an individual. The Wexler Adult Intelligence Scale and the Stanford-Binet Intelligence Scale are among such tests used. In these standardized tests educational, occupational, clinical and personality testing also occur. Non-test data measure a person's typical or maximal performance and can often be gathered through observations or recorded as expressions of the individual being evaluated.

Another approach to formal assessment is through work evaluation. According to Dickerson and Andrew (1974), "work evaluation is a comprehensive process that systematically utilizes work, whether real or simulated, as the focal point for assessment and vocational exploration, the purpose of which is to assist individuals in vocational development." Several packaged work evaluation systems have become quite popular in recent years, all of which have their advantages and disadvantages. These systems include Testing Orientation and Work Evaluation in Rehabilitation (TOWER), Jewish

Employment and Vocational Services (JEVS), the Wide Range Employment Sample Test (WREST), the Work Sample System and the Singer-Graflex Evaluation System.

Another method of assessment is situational. Because psychometric tests and work evaluation systems do not always provide all the data needed to prescribe adequate vocational training for handicapped students, behavior and performance methods have been developed to augment the situation. Korn et al. (1976) offered reasons for using behavioral and performance observations. According to the authors, many aspects of a person's vocational functioning are not revealed in tests or work samples, e.g., how an evaluee interacts with co-workers or supervisors, whether or not an evaluee is punctual in getting to the job setting or what the evaluee does while performing a task. Behavior and performance evaluations are the only ways to gather this information. Korn et al. further state that the best way to gather valid information about people is to observe what they actually do in a real situation, a practice that is consistent with behavior and performance observation methodology.

Results from psychometric tests, work evaluations and behavior and performance observations can give some clue to 1) the cognitive level of functioning of the student, 2) the way a student learns best and 3) any dysfunction for which modification in instruction has to be made.

Informal Assessment

Even if complete, partial or no formal assessment has been made of a student, it can be profitable both for the teacher and student to also conduct an informal assessment. This assessment could be designed for both handicapped and non-handicapped students. Conducting informal assessments

is necessary especially if formal assessments are inadequate or non-existent. Informal assessments are also important for those who may be dysfunctional in one or more of the three areas in the *CAP* approach.

Assessments, whether formal or informal, are necessary because their results are not ends in themselves, rather, they provide the clues necessary to modify programs for handicapped students, thus allowing the teacher to be aware of each student's strengths and weaknesses. For example, it would be useful in your instruction to know that one student learns more effectively by hearing information while another by reading. A third student might listen and read effectively but not be able to write well enough to express his/her knowledge. A fourth student may be capable of learning but might require a slower pace and more practice to reach necessary skill levels.

Like "regular" students in the classroom, the variations in abilities and problems of handicapped students are almost endless. For this reason, it is extremely helpful to gather specific information through informal means about each student in order to make the best use of his/her strengths so that learning handicaps can be overcome. Counselors and special services personnel can be helpful of course, but they often do not have the information about the student's most efficient learning modes. For these and other reasons, it is useful if not imperative, to conduct informal student assessments in the classroom.

The first of the methods described below takes about two hours of class time, but the results can save a lot of time and effort later. It should be noted that the procedures described below are not refined or precise, nor are the results definitive. However, the use of one of these or similar procedures can provide valuable information in identifying (1)

those students who are likely to have problems in classroom activities and (2) what class activities may present difficulties to specific students.

EXAMPLE I

The first example of informal assessment can be carried out in the following way:

1. Choose one or more entry level tasks for the course whose students you wish to assess.

2. Conduct a task analysis in order to determine the number of subtasks you will use, the sequence of your presentation, your behavior in presenting each subtask, the expected student response, the material to be used by both you and students and criteria of acceptable performance. Students should be expected to receive information presented in an audio, visual or a tactile-kinesthetic format. They could be expected to produce either verbal, written or rhetoric responses, either individually or as part of a complex sequence.

3. Instruct the students in each subtask and evaluate their performance.

4. Compile the results. A simple way of doing this would be to use the student roster that allows recording acceptable performance with a plus, unacceptable with a minus.

Table I illustrates this method of compiling the results.

The tabulations in Table I show that student A has difficulty with instructional formats that stress the auditory channel. Student B, however, is successful when instruction is presented in any mode. Student C might have more trouble with visual presentations than with verbal or manipulative, unless the visual is accompanied by a verbal explanation. The tabulations further show that student D has difficulty in succeeding in any of the formats presented. This student's problem will require more analysis. It may be that 1) the subtasks are too complex, 2) the rate at which the instruction is presented to too fast or 3) the amount of time allowed for assimilation of information and response is too short. One or more of

TABLE 1

METHOD OF COMPILING RESULTS
IN INFORMAL ASSESSMENT

STUDENT	SUBTASK				
	One	Two	Three	Four	Five
	Visual Presentation	Auditory Presentation	Demonstration/ Manipulation	Visual/Demonstration Manipulation	Auditory/Visual Presentation
A	+	-	+	+	-
B	+	+	+	+	+
C	-	+	+	-	+
D	-	-	-	-	-

these problems may be compounded by the fact that the student lacks the basic skills needed to master the subtask.

After the informal assessment has been carried out and the results have been tabulated, a determination should be made about the individualized approaches you, as the teacher, will use. In addition to the lecture method, you may need to provide and/or increase visuals, recordings, more detailed sequences of tasks and other techniques that the assessment may have indicated.

Soon after instruction and mode of instruction (as determined by the assessments) have been instituted, it would be necessary to frequently monitor the individual performance of each student. In this way, those students having more problems or those not responding can be quickly

identified. Steps can be taken to plan for a combination of instructional approaches that will assist these and other students to make progress in class.

While attention should be placed on teaching methods, the physical arrangement of the classroom should not be neglected. It may be that some students are unable to assimilate visual and/or auditory stimulation because they are distracted by things most people can tune out. Some people can work better in a quiet setting; others need a setting where they do not see a great deal of irrelevant activity such as people passing by doors and windows or other students moving about.

The physical arrangement of the classroom, along with the teaching method can help many students to perform well in school. However, steps need to be taken to insure that the student also has adequate study skills. If study skills are lacking assistance may be given in note-taking methods, outlining methods, organization of time, use of memory aids and other techniques which can make studying more productive.

EXAMPLE 2

As with the informal assessment procedure described above, this one limits the time necessary for the assessment and helps to determine the specific areas of abilities and disabilities of individual students.

I. METHOD

Round One:

5 minutes	Explain to students that (1) the assessment program will be brief, (2) it is your tool to determine how best to meet their needs and (3) it will not affect their grades in any way. Ask the students to take 15 minutes to write an essay on "What I Expect to Learn from this Class" or "How this Class Relates to My Career Goal" (or a similar topic).

15 minutes	Students write essays.
10 minutes	Give a lecture on some specific class topic which is unrelated to the class plans for the following five days. Use no visual aids.
10 minutes	Read ten questions to the students based on your lecture material. The questions should require short (one letter or one word) answers.
15 minutes	Have the students read a technical passage in a textbook that is unrelated to the class activities planned for the next five days.
10 minutes	Ask students to answer a written ten-question short-answer test on the assigned reading material.
10 minutes	Demonstrate a task related to your class topic.
10 minutes	Have students perform the task you demonstrated.

Round Two: (Three to five days later)

10 minutes	Read students ten questions similar (but not identical) to those in Round One dealing with the same lecture material. Again, students' responses will be one-letter or one-word answers.
10 minutes	Students answer a second written ten-question multiple-choice test on the Round One reading assignment.
10 minutes	Students again perform the task demonstrated in Round One.

II. GENERAL OUTCOMES

Regardless of the labeled handicapping condition (or lack of any label) of students in your class, you will want to look at the following assessment results:

A. Essay

- overall quality
- specificity of course or career goals
- realism of expectations for the class

B. Comparison of discrete lecture, reading and demonstration tasks

- overall quality
- differences in abilities shown for each input/output mode
- differences in quality of short-term versus long-term memory as indicated by comparing test results (overall and by input/output mode) of Rounds One and Two.

III. INDICATION OF COGNITIVE AND AFFECTIVE DIFFICULTIES

1. Results of Essay Assignment

A. An essay from a learning disabled student might show:

- letter or number reversals, e.g., "stuby" for study; "1799" for 1979
- misspelling of simple words, e.g., "prak" for park; "hapy" for happy
- other words spelled phonetically, e.g., "talafone" for telephone
- omission of words
- incomplete or run-on sentences
- illegible penmanship or writing which does not stay on the lines of ruled paper
- lack of organization, e.g., no paragraphs or rambling thoughts
- a messy paper with many words crossed out and/or many erasures
- thoughts of insecurity or self-doubt about his/her ability to succeed in school

BUT

- adequate vocabulary
- reasonable expectations of the class
- clear train of thought

B. *An essay from a retarded student might show:*

- misspelling of longer words; phonetic spellings
- missing punctuation
- lack of organization
- simple vocabulary
- short sentences
- unrealistic expectations of class
- insecurity or self-doubt about his/her ability to succeed in class
- a relatively short essay, compared to those of other students
- concrete thought, with abstract concepts seldom expressed

C. *An essay from an emotionally disturbed student might show:*

- excessive inclusion of inappropriate ideas into a concept
- idiosyncratic meanings of common words; 'new' syntax or 'new' words
- fragmentation of thoughts
- lack of organization, incoherent sentences or paragraphs
- interpenetration of inner fantasies or ideas and outer realities
- naming a whole by an unusual part, e.g., refering to a monarch (king or queen) by "the robe ..." as opposed to the commonly used "the crown..."
- unrealistic expectations of the class; possibly very grandiose plans for the future
- extreme self-doubt or self-confidence
- strong negative feelings about or fears of other class members, teacher or aide

Also note extreme reactions while writing the essay, such as:

- loud complaints about the assignment

- excessive suspicion of teacher's motive for making the assignment
- inappropriate mannerisms
- refusal to do the assignment
- excessive need to explain in person why the assignment was not done or was done in a certain way

2. Results of Discrete Tasks Assignments

A. *A learning disabled student might show:*

- much better performance with one type of instruction than another
- verbal or demonstrated understanding of the work which is much greater than that indicated on written tests

B. *A mildly retarded student might show:*

- low over-all functioning
- mistakes in understanding directions
- that more time was needed for completion of the test than other students
- retest results much lower than test results

C. *An emotionally disturbed student might react with:*

- one or more tests not attempted or giving up before time is called
- hostility or resentment to the assessment situation
- excessive need for teacher reassurance during or after the assessment situation
- withdrawal, anxiety or depression during or immediately after the test

IV. INDICATION OF PSYCHOMOTOR DIFFICULTIES

A. *Students with undetected hearing or vision problems might:*

- show wide differences in functioning on the discrete tests

- show evidence of straining to see or hear

- complain about auditory or sight problems

B. *The effects of movement-related barriers may also show up during the assessment process or initial class periods. These include:*

- acceleration and deceleration changes

- time pressures

- long walking distances

- waiting in a standing position

- sitting down and/or getting up

- moving in crowds

- carrying things

- reaching and handling

C. *Students with psychomotor handicaps may also evidence fears:*

- of getting lost

- of danger to personal safety

- of embarrassment at inept behaviors

EXAMPLE 3

The scenario that follows may indicate deficits in the cognitive, affective and psychomotor domains. One way to respond to these and similar situations in the classroom would be to use the student abilities charts by following the explanations and directions that accompany them in this third example of informal assessment.

Scenario

Has this ever happened to you?--Someone tells you a handicapped student will be enrolled in your class, and that the student is, say, learning disabled. But that's all. They don't tell you

what the student's specific problems are or how you're supposed to teach him/her. They just communicate the label, and you're on your own.

Or how about this one?--A student is in your class, it's the middle of the semester, and (s)he is far behind and failing.

The obvious answers don't help--the student attends regularly and works diligently but is not successful in one or more parts of your course. You are not sure of the barriers that prevent the student from succeeding, and no one else seems to be able to specify the student's problems either. What can you do?

A Way To Cope

The worksheet described here represents one way you might cope with these or similar situations. Whether or not the student is labeled as handicapped, you need to know specifically what (s)he can and cannot do so that remediation can be planned and provided. You may want to assemble a chart, similar to Figure 2 and Figure 3, for each student in your class or for only those students who are having problems. In this way the students' problems can be identified and possible solutions suggested.

On the following pages are two versions of the "Student Assessment Charts" (Figure 2 and Figure 3) preceded by a list of explanations and directions.

CONTINUED ON NEXT PAGE . . .

Explanations and Directions for Use with Student Assessment Charts

1. Check the list headed "Student Abilities" and delete or add as appropriate for your course.

2. Write a list of class activities, for example:

   a. Listen to a lecture on pattern selection
   b. Select an appropriate pattern
   c. Read text (written at the 12th grade level) regarding fabric qualitites
   d. Buy fabric . . . and so on.

3. Draw a circle in the boxes where activities require certain abilities. For example, to learn from reading the text, the student must be able to read effectively and to have adequate vision.

4. Decide how to assess student abilities in each area marked by a circle and record in the "How to Assess" column. (Assessment can be made by pre-testing students, to obtaining information from counselors or educational records, by observation, by asking the student, and so on.)

5. Make copies of the form as it is filled out to this point, and on each record the name of a student to be assessed.

6. Put a plus "+" in the circles where the student's abilities seem to be adequate for success in the activity. Put a minus "-" where the student's abilities do not seem to be adequate for him/her to successfully complete a class activity.

For instance, in the above example the student was required to read a 12th-grade-level text-book as one class activity. A circle would have been made in both the "Read" and "Vision" Student Abilities categories. If a student's vision was normal, but who could only read at a 6th-grade level, the box where "Vision" and "Read text ..." intersected would look like this: + , while the box where "Read" and "Read text ..." intersected would show this: - .

Sometimes, a student's problems might cause him/her difficulty in completing a task, even though the abili in question in not usually thought of in relation to that task. For example, a student who exhibits pronounced insecurity about his or her ability to succeed in school might react negatively to the reading assignment. In such a case, you would put a "-" in the "Self Image"/"Read text ..." box, even though this is not a normally required ability for successful completion of the task.

7. Each "-" on your chart now indicates that a problem exists. You might take steps to alleviate a problem by referring the student for counseling; by encouraging him/her to use tutorial services or an independent study laboratory; or by modifying your presentation mode or student expectations. In the "How to Help" category note briefly your plan to help the student attain success in your class. The student with the low reading level as indicated in the example, might require a proficient reader to tape relevant portions of the text. You might also suggest that the student get tutorial help in reading, in which case your "How to Help" column might read "tape/tutor", indicating both student and teacher activities.

FIGURE 2

STUDENT ASSESSMENT CHART

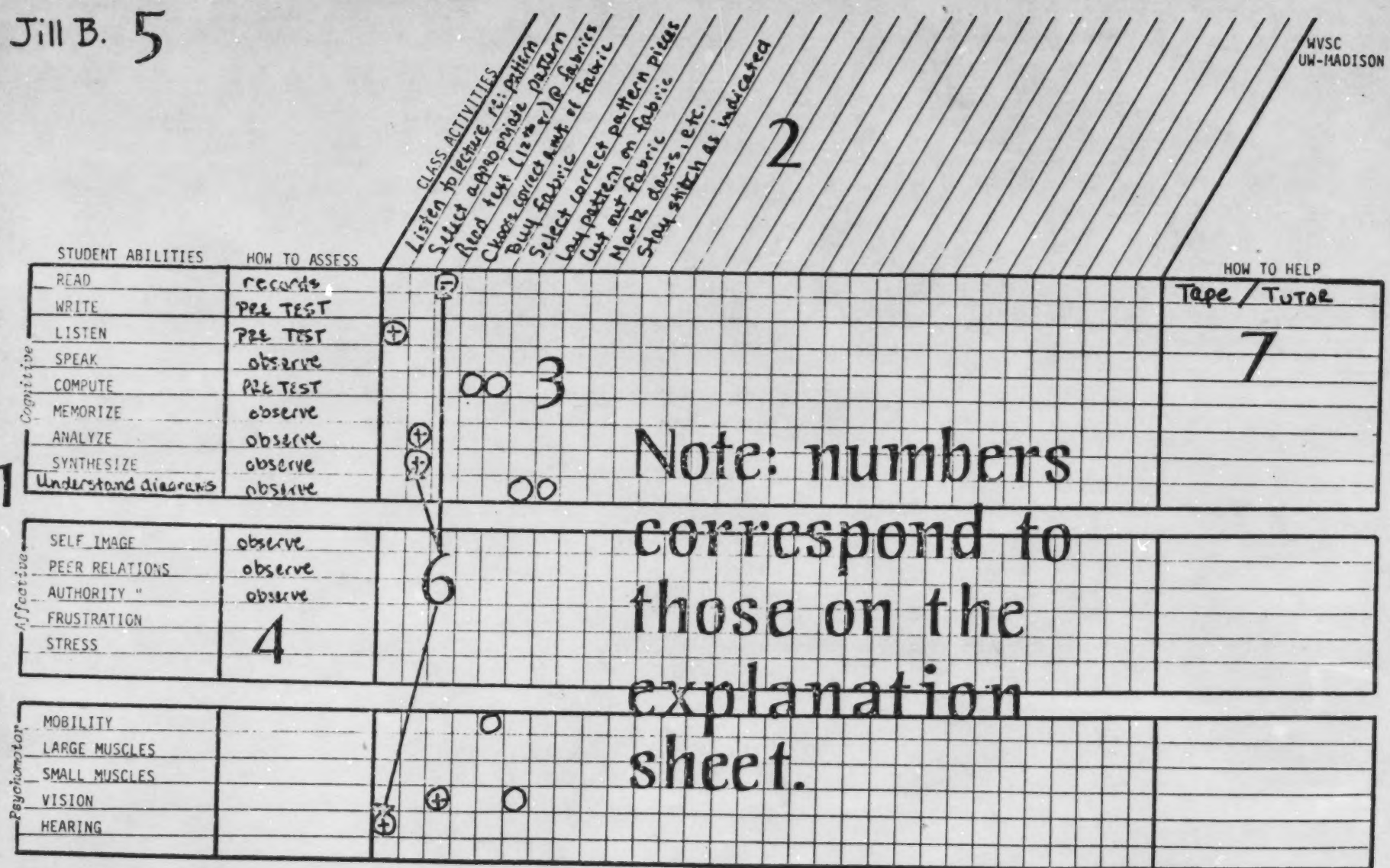


FIGURE 3

STUDENT ASSESSMENT CHART

	STUDENT ABILITIES	HOW TO ASSESS	CLASS AND CLINICAL ACTIVITIES	HOW TO HELP: STUDENT ACTIVITY	HOW TO HELP: TEACHER ACTIVITY
Cognitive	READ				
	WRITE				
	LISTEN				
	SPEAK				
	COMPUTE				
	MEMORIZE/RETAIN				
	ANALYZE				
	SYNTHESIZE				
	REASON/JUDGE				
	UNDERSTAND DIAGRAMS				
Affective	SELF CONF./SECURITY				
	PEER RELATIONS				
	SUPERVISION				
	FRUSTRATION				
	COPING/ANXIETY LEVEL				
	APPEARANCE				
Psychomotor	MOBILITY				
	LARGE MUSCLES				
	SMALL MUSCLES				
	VISION				
	HEARING				
	COORDINATION				
	TOUCH				

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CHAPTER IV

PRESCRIPTIVE PLANNING AND PROGRAM MODIFICATION

The results of formal and/or informal assessment can provide profiles on the academic, independent living and vocational attributes of an individual student. The academic profile can provide information on: reading and math levels, the learning modes by which (s)he learns best and an awareness on the part of the teacher of any learning deficiencies. An independent living profile can provide information on hygiene, safety, social interaction and money management while a vocational profile can determine the student's aptitudes, interests, job experiences and skills. Along with the identification and evaluation of the afore mentioned profiles, the student's employment goals need to be taken into account, e.g., what are the required knowledge and skills for the job, what physical demands would be made and in what environmental conditions would the student be working. After academic, independent living and vocational profiles are developed, a prescription for each student can be developed since profiles and job requirements can determine deficits in the student's abilities, motor skills and dexterity.

An integral part of prescription is goal-setting to determine what the student's goals (employment, further study, avocational interests) are in seeking vocational education. Another part of prescription is modification in (1) the school's physical plant to ensure accessibility to classrooms, labs and lavatories and (2) in equipment to compensate for the deficits

that may necessitate such modification. A third concern of prescription is course content. This includes:

- Number of objectives, skills, and/or concepts to be taught
- Tasks and subtasks needed to operationalize objectives
- Time constraints
- Reading level
- Math level, if applicable
- Order and rate of presentation
- Tests, manuals, workbooks, and lesson plans selected
- Sequence of tasks and subtasks for use by the entire class and by individual students.

Teaching strategies suggested by the organization of the contents of the course can help in determining the teaching and learning materials and aids for use by the teacher with the entire class or with the handicapped student on an individual basis.

An integral part of the teaching process is evaluation for mastery of course material. The contents of tests as well as procedures for testing should be developed to make allowances in quantity (not quality) and method of testing.

In summary, prescriptive planning and program modification would necessitate the following steps on the part of the teacher:

1) Determining the number and the name of each specific saleable job skill which can be taught in a course and the component tasks for each of those job skills

2) Determining specific skills or combination of skills that are essential to accomplishing job tasks, e.g., reading, math, personal courtesy, performance level

3) Determining the specific goals of the student with the handicapping conditions

4) Determining the kind and degree of skills and knowledge needed or expected prior to entry into the program. Skill proficiency could be determined by means of a pretest. Based on the results of these tests, appropriate modification in teaching methods and modes can be made

5) Determining instructional objectives, content, and content-sequencing of the instructional objectives, to reach established goals

6) Determining which teaching materials will be needed and whether they are available or have to be developed such as alterations in reading level and multi-sensory materials (i.e., audio/visual aids, models, blow-ups, etc.)

7) Determining testing methods to ensure proficiency.

Since developing individualized instructional packages is similar, in many respects, to modifying programs for dysfunctional students in vocational education, it might be profitable to briefly describe the steps necessary for individualizing instruction. The first step is to identify the occupation(s) for which instructional methods and modes will be developed. The second step is to gather as much information as possible on the occupation(s). This step might include 1) a task analysis conducted on actual job sites and 2) input from individuals employed in the field to ensure that instruction is not only relevant but job related as well. The third step is to derive, from a list of the major duties, the tasks to be performed. The more important tasks are then included for purposes of writing lesson plans. The next step would be to write the objectives, activities and evaluation for each task and/or objective. The lesson plan can then be prepared in different modes including those that stress audio/visual and tactile/kinesthetic approaches to complement lecture methods. These different modes of the lesson plan can then be used with all students in the class, those with and without special needs. When these methods and modes are implemented, they should be monitored so that a determination can be made as to whether they are meeting the objective of instructing those students with functional deficits. If they are not, then revision may be required.

The many steps required in developing individual student prescriptions - academic, independent living and vocational profiles, job

requirements and prescribing and modifying course work - should take into account the various learning modes and abilities of students. The implementation of these student prescriptions can lead to employment, advanced education and/or training and the pursuits of avocational goals. In the end, it can only lead to self-esteem and independence for the student and satisfaction for you in knowing that you have been the instrument by which an otherwise poor and/or frustrating experience can become a happy and satisfying one instead.

Thus far, information has been provided to equip you, the teacher, with the skills to more adequately serve those students with special needs in your classroom. Support was presented concerning the need to be cautious in labeling students by handicaps. It was suggested that the student be categorized by area of dysfunction as in the *CAP* approach promulgated in this report. A description of the individual disabilities that fall within the *CAP* approach was given and instructional methods were suggested for these dysfunctions. The need for some kind of assessment (formal or informal) was stressed. The results of such assessment can provide profiles that identify areas of dysfunction and can indicate to the instructor the teaching methods and modes by which the student learns best.

The following chapter provides an example of program modification. Curriculum on "Telephone Usage," a small part of the Business/Office vocational area, illustrates the *CAP* approach to modify vocational programs for handicapped students. A filmstrip/cassette (audio/visual) presentation titled "Atypical Teaching: Office Phone Usage" has also been developed for use in conjunction with and in addition to this handbook.

CHAPTER V

TELEPHONE USAGE

Exemplary Curriculum

Because schools are cognizant of the deficits in learning of individuals with special needs, steps are taken to compensate for and/or accommodate the handicapping condition. These steps, as indicated in earlier chapters, may include the following: modification of curriculum with regards to volume and level of difficulty, use of a variety of instructional modes that includes modeling and reinforcement and relevancy of training that is geared to independent living skills and/or employment prospects.

Programs in which handicapped students are capable of being trained cover a wide spectrum within each of the five traditional instructional areas. To illustrate, a student may be trained as a welder, carpenter or plumber within the Trade and Industrial Division. Likewise, training is possible in Dental Technology, Nursing or Medical Records within the Health Occupations Division; Production Agriculture, Animal Husbandry, Agricultural Mechanics, Horticulture and Agribusiness within the Agriculture Division; Clothing, Home Management, Foods and Nutrition, and Family Relations within the Home Economics Division; and Accounting, Business Administration, Data Processing, Secretarial Science and Business Machines within the Business and Office Occupations Division.

Exemplary curricula from the four traditional instructional areas viz. Trades and Industry, Health Occupations, Home Economics, and Agriculture

can be found in companion handbooks. This guide is illustrative of teaching strategies than can be employed within one unit of a course in the Office Occupation area that has been adapted for teaching handicapped students. The unit selected involves the use of the telephone in both home and occupational setting and can be titled "Telephone Techniques" or "Telephone Usage."

Demonstration of proper telephone techniques can be one of the following six skill areas that can be taught to handicapped students:

1. Demonstration of proper telephone techniques
2. Processing incoming and outgoing mail
3. Applying filing, record keeping, and spelling skills
4. Assembling and completing forms used by local businesses
5. Using duplicating machines
6. Discussing personal characteristics essential to success on the job.

[The areas equip the student with cognitive, affective or psychomotor dysfunctions to acquire job-related skills or skills for pursuing avocational interests.]

Based on the need to break down skills and abilities to teachable and learnable tasks when modifying curriculum, the following materials are presented as an example of what can be done in teaching proper telephone techniques.

The course for teaching correct telephone usage in regular classrooms follows the general outline presented in Figure 4.

FIGURE 4

Activities For Teaching Telephone Usage

Time	Suggested Activities and Learning Outcomes
2-3 weeks	The student should: 1. Develop a good telephone personality 2. Learn how to handle incoming calls -answering promptly -identifying company and self -screening calls -giving information -getting information -taking messages accurately -transferring calls 3. Study various services offered by telephone companies, e.g., automatic answering sets and recording telephone conversations 4. Know how to use telephone directories 5. Study about automatic dialing telephones 6. Become acquainted with long distance telephone calls as to their cost and time factors 7. Learn about direct long distance dialing 8. Practice making and accepting calls 9. Look up a variety of telephone numbers from directories for practice in using the yellow pages 10. Become acquainted with the types and functions of switch boards.

In addition to these basic skills, one needs to demonstrate how a student can develop a good telephone "personality." This requires the following characteristics to be emphasized:

1. Good vocal qualities to include tone, enunciation, pronunciation, pitch, volume, projection and pace
2. Frequent use of the name of the person on the phone
3. Correct use of language
4. Have something to say
5. Be a good listener

These qualities, when developed, will make a telephone voice "smile" and will be characterized by pleasantness, friendliness, interest, sincerity, helpfulness and naturalness over the phone.

A good telephone personality and telephone courtesy go hand in hand and are expressed over the telephone when users--

1. Answer the call pleasantly and promptly
2. Use proper identification
3. State clearly the purpose of the call
4. Make inquiries tactfully
5. Offer assistance and volunteer information
6. Use caller's name when appropriate
7. Use such phrases as "please" and "thank you"
8. Give undivided attention to the conversation
9. When leaving the phone, give a reason and ask permission
10. Get the person's attention politely when returning on the line
11. Avoid unnecessarily long conversations
12. Show consideration for other employees who may share the line with you (personal calls should be discouraged)
13. Conclude the call properly and replace the receiver gently

These listed qualities of good telephone personality and courtesy are demonstrated in the following anatomy of a telephone call (Figure 5). (This outline is taken from Fox Valley Technical Institute's Individual Study Unit on the "Telephone" by M. Kolbe, June 1975.)

FIGURE 5

Anatomy of a Telephone Call

I. BEGINNING THE CALL

	Caller	Answerer
A.	Allow sufficient rings	Answer promptly
	a. to give enough time to answer (1 min. or about 10 rings)	a. to be courteous
	b. to increase likelihood of completing call	b. to avoid causing caller to wait
		c. to prevent caller from hanging up
B.	Identify yourself promptly	Identify yourself promptly
	a. to place answerer at ease	a. to identify location reached
	b. to motivate answerer to identify self	b. to motivate caller to identify self
	c. to save time	c. to save time
C.	Ask for desired person	Respond to caller's request
	a. to give indication of purpose	a. to be helpful
D.	Express appropriate greeting	Respond to greeting
	a. to be courteous	a. to be pleasant
	b. to gain full attention	b. to welcome caller graciously
	c. to "set the tone" of the call	c. to indicate attentiveness

II. BODY OF THE CALL

Caller	Answerer
A. State purpose clearly	Listen carefully
a. indicate if call is to:	a. to prevent misunderstanding
1. inform 2. inquire 3. persuade 4. exchange ideas 5. meet emergencies 6. transact business	b. to prevent inconvenience
B. Be alert to questions	Ask clarifying questions
a. to increase understanding	a. to clarify doubtful details
b. to be courteous	b. to indicate interest
C. Develop and record facts	Develop and record facts
a. to gain understanding	
b. to provide a record	
c. to accomplish purpose of call	
d. to assume fulfilling commitments	

III. ENDING THE CALL

Caller	Answerer
A. Verify information	Verify information
a. to insure complete understanding	
b. to insure "follow-through" action	
B. Terminate call politely	Cooperate in terminating call
a. to avoid abrupt closing	a. to indicate understanding that conversation is ending
b. to avoid procrastinating after purpose is accomplished	b. to save caller's time

c. to give impression of being pleased with results of call	c. to express pleasure at having received call
C. Hang up first	Allow caller to hang up first
a. to permit last-minute thoughts after having said "goodbye"	a. to avoid missing last-minute thoughts after having said "good-bye"
D. Replace telephone quietly and securely	Replace telephone quietly and securely
a. to avoid irritating noise	
b. to prevent telephone from being "busy" to next caller	

Time should be taken to carefully plan a call. The following activities in Figure 6 can be part of this plan as a student prepares to make a telephone call.

FIGURE 6

Planning a Telephone Call

1. Write down pertinent information
   a. Purpose or reason for making call
   b. Name of person to be reached
   c. Points to be covered (directions, description, dates, etc.)
   d. Questions to be asked
2. Gathering necessary materials
   a. Pencil and pad
   b. Calendar
   c. Appointment schedule
   d. Notes on points to be covered
3. Determining the best time to call
   a. Business/Lunch hours
   b. Consider time zones
4. Determining type of call to be made

a. Local
b. Direct - Dial
c. Station-to-Station
d. Collect
e. Credit Card
f. WATS/STS
g. Conference Calls
h. Data-Phone Service

5. Finding the number

a. Your own directory of frequently called numbers
b. Telephone Directory
   1. Yellow pages - subject listings, alphabetically
   2. White pages - alphabet listings
c. Operator assistance
   1. Directory Assistance ("information")
   2. Direct dial information operator

6. Dialing the number

a. Listen for dial tone before dialing
b. Move dial all the way to finger stop before releasing

Teaching the unit on telephone usage, which may include details enumerated above, will need to be supplemented with practice im making and accepting calls, learning how to use telephone directories and becoming acquainted with various equipment that telehpone companies provide to make their service faster and more efficient, e.g., switchboard, button telephone, tele-typewriter, picturephone and mobile telephone.

Telephone Usage Taught to Students with Affective and Psychomotor Dysfunctions.

The segment on telephone usage taught to "regular" students need not be different (in content, amount of material or level of difficulty) for students with special needs. Changes may be required, however, in the way the material is taught, particularly for students with affective and/or psychomotor dysfunctions. Lectures, audio and/or visual aids, demonstrations and/or hands-on methods can all be used to teach students with

affective and psychomotor dysfunctions. Additionally, students who have psychomotor dysfunctions may require changes in the physical arrangement of the classroom with regards to seating, lighting and environment--as well as modifications of equipment.

Modification of equipment for instructing students to use the telephone are many and varied. The telephone company has equipment for those individuals with hearing, visual, or orthopedic impairments as well as aids for home bound students. For the hearing impaired, for example, an adjustment wheel on the handset amplifies the voice being received while a bone conduction receiver transmits sound vibrations to the inner ear. A small transistorized headset amplifier is available for switchboard attendants with hearing impairments. Other aids include tone ringers, loud bells, 8-inch gongs, signals in different frequencies, plastic gongs and lamp indicators for those individuals who have difficulty hearing the telephone ringing. For the visual impaired, the multi-line key telephone set can be modified by the telephone company so that the person can hear rather than see which line buttons are illuminated. The same procedure is used in a "seeing aid" console where activated lamps can be located by moving a light sensitive probe (which buzzes in response to lighted signal lamps) on the console, thus allowing a blind person to become a PBX console attendant. For individuals with speech loss, the electronic larynx is available. It substitutes electronic vibrations for natural vibrations of the voice. Sound is produced when the electronic larynx is placed against the throat and the user can learn to speak conversationally and even with inflections.

Several adaptions have been made to telephone equipment for the orthopedically impaired. Among these are the "Touch-a-matic," "One number dialer,"

"Touch-Tone," "Trime line," speaker-phone, single-button phone and jack equipped telephone. The "touch-a-matic," for example, can be used by individuals who have difficulty dialing a telephone because of partial paralysis or coordination. The speaker-phone and single-button telephone can be used by individuals who are unable to hold a hand set. As part of the services offered by the telephone company to individuals with special needs are the teleclass service and portable conference telephone. These are used as teaching aids for home bound students.

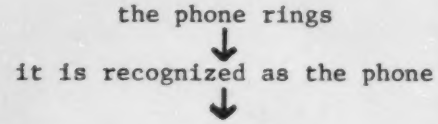
In addition to modifying facilities and equipment for students with psychomotor difficulties, it might be necessary to provide materials that are self-paced. These can assure the student that (s)he is not expected to meet the goals set for timed activities. In this regard, emphasis is placed on efficiency and accuracy rather than speed. For the student with affective disabilities, inappropriate attitudes and depression in class may necessitate changes in strategies used to teach the unit on telephone usage. Here again, the content and the amount of material to be covered need not be modified. Rather, encouragement, patience and a low pressure environment (such as not being timed for getting materials done and evaluation) are required. The student with affective dysfunctions needs success-oriented activities to gain confidence so that (s)he can inculcate healthy interpersonal skills and experience a sense of accomplishment.

Telephone Usage Taught to Students with Cognitive Dysfunction

While the student with cognitive dysfunction requires all the provisions and modifications made for students with psychomotor and affective disabilities, they require additional considerations as well. Individuals

with low cognitive functioning have usually been slotted in unskilled and menial jobs, while the traditional method of providing vocational training for these individuals has been through the development of on-the-job training programs. The emphasis of these programs was in developing and instilling good job attitudes and habits rather than the development of specific vocational skills. It was also common practice for special educators to place low cognitive functioning individuals with community employers without any pre-requisite skill training. Thus, the employer is left with the ultimate responsibility for providing occupational instruction. However, studies have shown that low cognitive functioning individuals can and do achieve success in all vocational areas. In the busines/office area, success has been achieved in business filing, introductory typing and duplicator operation, among others. Teaching these individuals to use telephones in a work situation or as part of daily living skills is no exception. Individuals with cognitive dysfunctions (like those with affective and psychomotor disabilities) require that the telephone usage program be individualized, open-entry/open-exit, self-paced and repetitious. Also, matching objectives and activities must be matched with student needs and teaching style matched with students' learning styles.

Lynn Behm (Columbus Community Center, Salt Lake City, Utah) developed a telephone usage program for low cognitive functioning individuals. She emphasizes four basic concepts in teaching telephone usage. They are: chaining, modeling, shaping and reinforcement. In the context of telephone usage, a conversation can be looked at in terms of a chain of behaviors that are emitted in a particular order:



it is answered
↓
the caller responds

In order to help a student learn these chain activities, several teaching methods can be employed. Modeling is the technique of teaching correct behaviors through demonstration. The technique that is used to develop new responses is called shaping, since shaping involves development of behavior by successive approximations. Encouragement, for purposes of reinforcement, is given to a student for responsible telephone activity and achievement that is not only demonstrated by minimum proficiency, but repetition as well.

Learning of telephone usage by low cognitive functioning individuals through the concepts of chaining, modeling, shaping and reinforcement requires continual repetition; demonstrative enthusiasm for activities being undertaken; adequate preparation for all aspects of the class session, including a review of lecture or lesson material and the availability of any equipment (such as projector, tele-trainer or others) that may be required; and the deliberate rate at which the lesson is progressing. These efforts along with concepts promulgated by Behm do not guarantee success but can certainly lead in that direction.

Low cognitive functioning students can become proficient in placing and receiving calls with or without the aid of a tele-trainer. In learning to receive calls without a tele-trainer, for example, the following steps can be used: place students in a group; discuss and/or illustrate by audio-visual or other means the parts of a telephone call including the beginning, body, and closing; drill students, using the concepts and strategies reiterated above, to answer an imaginary phone. With a tele-trainer, the information taught in the preceding lesson can be used by

students to become even more proficient in using telephones. Discussions can accompany and/or follow each phase of the practice session. For example, students can be asked 1) to indicate the significance of a phone ringing, 2) what should be done when a phone is heard ringing and 3) how to answer and close a telephone call. Various subjects can be used to practice the body of the telephone call. In role playing situations, students may learn to call the police to report an accident or a fire, to get fare and schedule information from the bus company, to get information about a furnished apartment, to get utilties turned on or installed and to take messages among many others.

One main difference between students with affective and psychomotor dysfunctions and cognitive dysfunctions is that the amount of telephone usage information for low cognitive functioning individuals may be limited, both in level and quantity. Besides these exceptions, however, the methods and modes of instruction for all dysfunctional students may be as follows:

Combining small audio/visual/tutorial units to give students an effective learning package embodying instructional objectives
Sequencing instruction in small steps
Providing practice where necessary
Providing for evaluation and interaction between student and instructor on a one-to-one basis.

Conclusion

While the topic of telephone usage was selected for modification (using the *CAP* approach), any other subject in the business and office occupations area can be substituted. Accordingly, additional examples of modification, which were done at a recent workshop, are included in the Appendix. Hopefully, this source can be of assistance to instructors in

becoming knowledgeable in modifying vocational programs for those students with exceptional needs.

It is our hope that instructors will find this handbook/guide enlightening and helpful as they strive to become better teachers to all students enrolled in business and office occupation classes.

BIBLIOGRAPHY

Behm, Lynn. Telephone Usage Program. Salt Lake City, Utah: Columbus Community Center, 1978.

Dickerson, L.R. and Andrew, J.D. Work Adjustment: A Resource Manual. Menomonie, Wisconsin: Department of Rehabilitation and Manpower Services, Research and Testing Center, 1974.

Goldman, L. Using Tests in Counseling. (2nd ed.) New York: Appleton-Century-Crofts, 1971.

Korn, T.A., Ranney, W.C., Schenck, G.R., and Schober, D. Behavior Identification and Analysis in Rehabilitation Services. Menomonie, Wisconsin: Stout Vocational Rehabilitation Institute, 1976.

Polisky, Mildred and Reistad, Earl. Program Modifications and Prescriptive Teaching for Handicapped Students in Milwaukee Area Technical College Business Lab. Milwaukee: MATC, 1976. (Mimeographed)

APPENDIX

APPENDIX A

TEACHING STRATEGIES FOR THE EMOTIONALLY DISTURBED

Depression

The following procedure may be used in dealing with a student suffering from depression.

1. Observe the student's behavior for consistency and severity and pay special attention to his/her classroom performance.

2. In a concerned and friendly manner privately discuss with the student his/her performance and your observations.

3. Listen to the student's perception of his/her problem, paying special attention to his/her perception of the cause, as well as length and severity, of the problem.

4. Confer with professionals in the mental health field if you are uncertain about the student's well being.

5. Be supportive of the student's efforts in the classroom.

6. If the problem persists, suggest to the student in a kind and concerned manner, that (s)he discuss his/her situation with a guidance counselor or other mental health professional.

7. If the student receives or has been receiving professional counseling, a teacher may be a valuable resource in helping the student to make progress in classroom performance. For example, a teacher may be able to help a depressed individual continue in a program by giving the student support and encouragement. Also, the teacher's observations of say, the student's attendance and enthusiasm may help the therapist determine if the treatment is working.

Interpersonal Skills

When dealing with a student demonstrating behavioral problems it is important to:

1. Pinpoint the problem(s). To say that a student has a bad attitude is not only vague, but the student may not understand what the problem is nor what improvements are necessary. It is better to specify the problem e.g. you turn in sloppy work, you leave your work station in a mess, and you treat our safety rules and regulations lightly.

2. Evaluate your tolerence level regarding appearance, social skills, etc. Is it realistic for the student to comply? Is it necessary for classroom functioning? Is the behavior required for seeking and/or maintaining employment?

3. Discuss with the student your rationale for suggesting any changes in behavior. The student should leave the meeting knowing what behavioral changes are expected and the ramifications for not adapting.

4. As the student progresses (which may be very difficult for the student) it is important to recognize his/her efforts, e.g., though individual attention, comments on assignments and classroom responsibilities.

5. If the student is not making progress it may be wise to confer with professionals in human services area for possible alternative strategies.

Motivation

The following strategies may help in motivating a student to start or follow through on classroom activities.

1. Show relevancy of classroom assignments to outside employment.

2. Structure instruction in ways that allow student to make progress.

3. Provide student with support and encouragement during frustrating or trying times.

4. Recognize work well done.

5. Eliminate courses or segments of courses that are not vital to a person's vocational goal.

6. Conduct tours of industry to stimulate student's interest and curiosity in chosen field of study.

7. Determine what classroom strategies motivate an individual and use them, e.g., verbal praise, a challenge, comments on a test paper, individual attention, grades, classroom responsibilities, etc.

Self-Esteem

The following methods or ideas will probably improve a student's self-esteem making him/her feel more capable and important.

1. Improve self-awareness by pointing out to the student his/her individual strengths.

2. Provide student with a series of success experiences as opposed to initial difficult tasks which may be a failure experience.

3. Provide student with support and encouragement when attempting new or difficult tasks.

4. Acknowledge tasks that the student has done well.

5. Use student's well done exercise as a class model.

6. Schedule, early in the program, courses that focus on a student's strengths.

7. Have student instruct fellow students on tasks that (s)he has mastered but the others did not.

Drug Side Effects

A teacher should consider the following rules when working with a student using legal drugs.

1. Never suggest to the individual that (s)he discontinue or in anyway modify its use.

2. Privately discuss with the student problems which you have observed and/or those that the student perceives.

3. If these problems jeopardize the student's work in the program it may be wise to suggest that the student consult with a physician. Possibly, the physician can make alterations in the drug dosage which may remediate the problem in the classroom setting.

4. Specifically, pinpoint problems (e.g. hand tremors when soldering) in order to effectively communicate with physician.

5. Generally, the teacher's observations and comments are very important to the professional who is treating the student. Recording observations, specific instances, dates, and areas of difficulty may be extremely useful to the physician.

APPENDIX B

SCRIPT FOR COMPANION A/V
OFFICE PHONE USAGE

Objective: to teach business education instructors about training handicapped students to use the telephone.

TELEPHONE USAGE

Narrative and Picture Guide

by

Elizabeth Carlson

Pictures	Narrative
1. Production Credit	Typically, the unit on telephone usage in the vocational school business course rests on the assumption that students are more than slightly familiar with the telephone.
2. Textbook on business usage of telephone.	
3. Typist on phone	After all...who, in this society, isn't? Who doesn't learn, by nursery school age if not sooner, what this sound signals and how to respond to it?
4. Ear of hard of hearing young man.	
5. Head of young man.	Who? Well...someone like that young man in my class, the one whose hearing impairment began in earliest life.
6. Young woman on phone.	Who besides the hearing impaired doesn't learn, by kindergarten age at least, how to distinguish between this sound...?
7. Man in office using a phone.	
8. Woman in office using phone.	...and this one...?

Pictures	Narrative
9. "Ellen," EMR woman.	Someone who has never placed a phone call--that's who...like Ellen--one of my students. Her over-protective parents always meant to teach her, knew they should...but, you see, she learns very slowly...and there were so many things to be taught...and someone was always near to place calls for her...and so...well...
10. Same woman	
11. Hearing impaired student.	All students are entitled to equal opportunity to learn this indispensable vocational and living skill--even those who, for reasons physical, mental, emotional, even cultural, are not ready for the content of the typical business education unit...
12. LD student.	Also those who are not able, for whatever reason, to learn by the teaching methods typically employed.
13. Blind student with cane.	And the question is...what can a teacher do?
14. Paraplegic in wheel chair.	What can you do to assure that no student in your class is handicapped for learning how to use the telephone?

Pictures	Narrative
15. "Atypical Teaching: Office Phone Usage"	That's the question!
16. Student in the class.	What can you do? Nothing if you insist on sticking to typical unit content and typical teaching methods and materials.
17. Another student.	And nothing <u>until</u> you know who, in your classroom, may be handicapped for learning effective use of the telephone for business purposes.
18. Student writing in blue book.	Well I, for one, always give a pre-test to the whole class. Just a simple written test...a few questions that will give me some idea of what they already know about the subject.
19. Student writing.	But written tests don't always accurately reflect a student's knowledge and abilities. Where there is learning disability, for example...or visual impairment...even emotional disturbance....
20. Student expressing frustration with written exercise.	
21. Student expressing frustration with written exercise.	Any student who has trouble reading the questions on a written test may be expected to have trouble using a telephone directory...<u>and</u> learning

Pictures	Narrative
	from printed materials: that's the kind of information you're looking for.
22. Teacher and hard of hearing at teletrainer.	Uh-huh...but a student may excel on a written test and still be at a total loss when confronted by a telephone. That was the case with my hard-of-hearing
23. Voc teacher at teletrainer.	student. From reading and observation he had accumulated enough intellectual understanding to mask the fact that he
24. Hard of hearing's hands.	had never spoken into a telephone or heard another voice coming through one.
25. Hard of hearing.	We were near the end of the unit when I discovered that fact. All that wasted time...!
26. Teacher's face.	Teachers who are sensitive to the presence or possible presence of handicapped students will cultivate a multimedia--"Show-and-Tell"--approach in all classroom activities...testing and pretesting included.
27. Teacher's face.	If only I'd sat him down at that teletrainer sooner...
28. Yellow pad on which outline is being developed.	Pre-testing for the business phone usage unit, you will first compile a

Pictures	Narrative
	checklist covering every category of general telephone usage....
29. I. Use of Directory	You want to find out each student's proficiency in using the telephone directory...to find local numbers in both the white and yellow pages; to find unknown long distance numbers; to find emergency numbers...
30. II. Placing and receiving calls A. Local B. Long Distance C. Telephone Services	What is the student's proficiency in placing and receiving calls? Does he or she know how to operate the dials or buttons on the types of phones commonly used? How to dial Directory Assistance? Emergency assistance? The meaning of "hold"? Does the student know how to place long distance calls? Direct dial? Operator assisted? Person-to-person?
31. III. Telephone Style	And your pre-test should include some evaluation of student's telephone "style." Do they know how to initiate terminate calls...courteously? Do they speak to a human being on the other end of the line...or "at" the

Pictures	Narrative
	telephone? Do they know when and how to identify themselves?
32. Ellen	You are answering the phone at your home. When I say "Ring," you answer just as you normally would. Okay? Riiinnnng!
33. Sample pre-test checklist.	To conduct the pre-test, you might use a teletrainer...realistic toy phones... or no phones at all. With a directory at hand, a few telephone roleplay
34. Ellen at teletrainer.	situations in mind, and a screen to place between your face and that of the student, you can learn a lot about where any student is "at" vis-a-vis the telephone.
35. Ellen checking Directory.	Now, please use the Directory to look up my telephone number. If you're not sure how to spell my name, it's written on a card in front of you. You're calling to invite my wife and me to your birthday party, so I'll be quick to answer when you say "Ring!"
36. Ellen picking up phone.	Unless of course you don't dial the right number! Say each numeral loudly so I can hear it, please.

Pictures	Narrative
37. Pre-test checklist.	For general class pre-testing you might enlist the help of some advanced students or cooperative colleagues. But when you have isolated any student who will need extra help to learn business phone usage, you yourself must conduct a more thorough examination.
38. Ellen on phone.	You are the one who must determine the exact boundaries of student's telephone proficiency...and the one who must assess the student's learning
39. Ellen on phone.	abilities to determine what modifications may be needed in learning activities, materials, equipment...
	This information will enable you to design a learning program that will prevent student's inexperience or disabilities from handicapping.
40. "Hard of Hearing Learning Program"	A <u>particular</u> learning program for a <u>particular</u> student: Equal learning opportunity for hanicapped students means individualized learning programs... individualized in content, to whatever extent is needed; individualized in teaching methods and modes, in whatever

Pictures	Narrative
	ways needed. "Program modification" is "Program individualization."
41. Hard of hearing on phone.	The greatest "modification" required for my hard-of-hearing student was in the area of equipment... special equipment that enabled him to hear a voice on the phone.
42. Hand of paraplegic dialing phone.	With physically handicapped, visually impaired or hearing impaired students, "modification" may involve nothing more than acquiring some special equipment--many kinds exist.
43. Hands using special equipment.	Equipment that types telephone messages for the hearing impaired; auditory equipment to inform the visually impaired of an incoming call on a switchboard or multi-line phone;
44. Paraplegic on phone.	an electronic larynx for voice loss victims; manipulative attachments for the physically disabled....
	The learning program I designed for my student also included some special instruction in basic telephone
45. Hard of hearing on phone.	usage. After all, he'd never actually used a telephone.

Pictures	Narrative
46. Ellen struggling with phone.	For any student who has had little or no telephone experience, you will "modify" the standard unit to include "back to basics" instruction.
47. Ellen listening into phone.	Which may mean such basics as... which end of the phone to speak into, how to dial, what to do when the phone makes funny noises...
48. Ellen listening into phone.	What that sound means, Ellen, is that the phone you're trying to connect with is already in use--as we say, "the line is busy." You should hang up and wait five or ten minutes before dialing the number again.
49. Teacher hanging up tele-trainer phone.	Wondering how to find time to give this kind of instruction? Why not encourage classmates to give a hand...or the student's friends and family?
50. Visually impaired tax specialist.	You may also need to adapt aspects of the standard unit content to the abilitities of a particular student--for example, the material on taking telephone messages must be modified for the visually
51. Visually impaired tax specialist.	

Pictures	Narrative
52. Visually impaired tax specialist.	impaired student...who also may need additional instructions in the use of the phone company's Directory Assistance.
53. Standard text.	In most cases, you will find less need for modifications in the area of content...more in the area of teaching methods and modes.
54. Hands with phone.	Aware of the presence in your classroom of students who are learning disabled or visually or hearing impaired,
55. Teacher with film projector.	you will always supplement verbal presentations of material with hands-on demonstrations, audio-visual presentations of various kinds...lots of situational roleplay...field trips.
56. Teacher using telephone poster.	Thinking about the needs of my hard-of-hearing student made me aware of my own over-reliance on verbal teaching. Made me aware also of my tendency to talk behind my hand...or
57. Teacher using telephone poster.	to stand in front of a window while lecturing: very hard on lip-readers. More than that--hard on everybody in the class. When I "modified" my own

Pictures	Narrative
58. LD student.	habits and teaching techniques in these ways, I noticed that everyone's interest perked up, everyone's learning improved. Everyone's, that is, except slow learner Ellen's....
59. Ellen on phone 60. Ellen's face.	For a slow learner, you may need to limit content to those uses of the telephone that might be required in the particular type of office job this particular student may be expected to fill. And you will need to expand the amount of time--yours and the student's--given to each content item.
61. Text--long distance section. 62. Teacher with teletrainer phone.	I decided that Ellen might never be called on to place a long distance call for an employer:--that eliminated the need for her to learn a large and complex segment of the standard unit content. As a general office assistant, she probably would sometimes have to take calls intended for others, so I zeroed in on that. But only after she had mastered basic telephone usage...

Pictures	Narrative
63. Ellen on phone.	With any slow learner, one-step-at-a-time is the general rule...one <u>small</u> step at a time...
	That's right, Ellen! That tone means you can go ahead and dial the number. But wait...have you written down the number you want to call?
64. 263-4108--beside phone dial.	You must always do that. Good.
65. Ellen's finger dialing "<u>8</u>".	Now dial the number.
66. Ellen looking at teacher.	Another rule...
	Hang up, Ellen!
	...assume nothing!
67. Ellen dialing.	I forgot to tell you, Ellen, to begin with the numeral on the left... here. I'm sorry I forgot. Now, please dial the number.
68. Typed list of steps.	Teaching a slower learner will test your abilities at task analysis; what <u>are</u> the small steps involved in any phone call?--in, say, taking a message for someone else?
	Your patience will be tested too, because...

Pictures	Narrative
69. More of the list.	You know what that sound means, Ellen. We talked about it before. Remember?
	...because much repetition and drill are necessary, at each small step, to enable the slow learner to learn.
	Hang up, Ellen. Hang up, and we'll talk about the sound...again.
70. Atypical Teaching	Though it's a lot to ask of a busy teacher, atypical teaching has its rewards.
71. Hard of hearing's hand on phone.	You may find that modifications made for handicapped students make the unit more interesting...more vital, alive...
72. Hard of hearing talking on phone.	for everyone in the classroom, including yourself.
73. Ellen on phone.	You will gain satisfaction in knowing that you've delivered equal opportunity to learn an essential vocational and living skill to <u>all</u> your students.
	And you might reap even more personally warming rewards....

Pictures	Narrative
74. Project Credit	Hello. Johnson residence. Sam speaking. Ellen? Ellen! Did you place this call yourself?! That's terrific!
75. Production Credits	
76. Teacher on phone.	Come to your birthday party? You bet we will! Thank you, Ellen. Thank you!

APPENDIX C

EXAMPLES OF PROGRAM MODIFICATIONS IN BUSINESS/OFFICE OCCUPATIONS

DEVELOPING INDIVIDUAL STUDENT PRESCRIPTIONS

Course: Typing II - Clerk Typist Program

I. *Students Handicapping Conditions.* This course will be modified for students who are legally blind.

II. *Develop Student Profiles.* The students enrolled in this course may be print or braille readers. Some may be congenitally blind and others may be adventitiously blind. Some may have disabilities that are more prevalent than blindness; such as poor health caused by diabetes, orthopedically handicapped, and culturally deprived.

III. *Set goals for employment or other objectives.* After a student completes this course, there are many alternatives for the student to consider. These alternatives may include the following:

1. Continue in the clerk/typist program for continuing course work leading to a Certificate of Proficiency.

2. Branch out into a specialty area, such as, insurance, medical, or legal.

3. Secure employment in the clerk/typist field.

IV. *Identify Skills to be Learned.* In order to be competitively employed in the clerk/typist area, the student must possess those skills necessary for at least entry level positions. Some of the basic skills should include: a typing speed of 55+ wpm within an error allowance, the ability to transcribe correspondence in mailable form, the ability to adapt to typing formats for correspondence, knowledge of other functions and duties in an office, and above average telephone techniques.

V. *Make Requests for Assistance in Developing Academic, Independent Living Skill and Vocational Prescriptions.* Before a student can enter the clerk/typist program, he/she must be able to live independently. The student is evaluated on his/her ability to handle the course work in the clerk/typist program and the student has done extensive work in vocational exploration before deciding on this particular career.

VI. *Outline Instructional Techniques to be Used.* Because visually impaired students who enter the clerk/typist field will probably be using transcribing equipment, all of the material will be dictated on cassette tape. The directions for various assignments will be broken down into simple terms and visual information will be explained in the lesson.

VII. *Determine Materials to be Developed or Modified.* The typing II course is completely visual and everything in the course has to be restructured and recorded for a visually impaired student. Student enrolled in the course now must have a reader present at all times in order to complete an assignment. It is felt that if a visually impaired student

is to be ready for employment, he/she must have as much experience as possible working independently in class.

VIII. *Develop Student Evaluation Techniques.* A visually impaired student enrolled in Typing II will be given the same evaluations and scored the same as those other students in the class. A reader will be present for the evaluation because a student is also scored on speed as well as accuracy.

EXAMPLE 2

PROGRAM AREA: Marketing

LEVEL: Assoc. Degree

COURSE: Marketing Principles

CUSTOMARY MODE OF INSTRUCTION: Lecture and Discussion

TESTING: Objective Format - T/F, Multiple Choice, Short Answer

CLASS ASSIGNMENTS: Readings - Text and References

OVERALL OBJECTIVES OF COURSE:

1. To give the student an overview of the marketing process.
2. To provide a preview of the entire marketing program.
3. To introduce the functional vocabulary of marketing.
4. To introduce the fundamental concepts of marketing.

HYPOTHETICAL CASE FOLLOWS:

A. Assessment Of Disability:

Type of disability being considered in conjunction with the project:

Learning Disabled - Student cannot read and comprehend materials presented-Student can learn by auditory means. Student can verbalize this body of knowledge.

B. Students Employment Goals:

Student expresses a high degree of motivation which is career oriented. Prior experiences in field have been positive. Possesses basic job skills. Student appears to be able to handle job related stress. Student has demonstrated the ability to cope with a learning disability.

C. No modification of physical plant is required in conjuction with this student.

D. Course Content Can Remain Constant In Terms Of:

1) Number of objectives
2) Tasks
3) Order of presentation
4) Rate of presentation

Course Content Needs To Be Modified In Terms Of:

1) Time constraints

2) Reading requirements

E. Lesson Plans Would Be Unaltered.

F. No Text Would Be Required For This Student.

A tape recorder/player would be needed.

G. Classroom Management Would Not Be An Issue.

H. Teaching Procedures To Use:

1) Student would attend regular class sessions.

2) Student would position himself in the classroom to allow good reception for tape recording.

3) Student would tape record classes.

4) Student would participate in discussions.

5) Text materials would be available on tape cassette for student use.

6) Student would have the tapes generated in class and the tapes pre-recorded for home or LRC use.

I. Testing:

1) Student would be tested orally - by instructor - in instructional office.

2) A feedback session or de-briefing would follow each testing session.

J. Grading & Recordkeeping Would Be Handled As For Other Students.

K. Support Services:

1) Student would be encouraged to see the instructor in frequent office sessions in order to monitor progress.

2) Student to student tutorial services or L.D. student participation in a "normal" student group might be indicated.

3) Support from A/V Department would be available.

4) Professional counsel might be indicated - particularly in the area of the self-limiting nature of the L.D. in the job setting.

L. All Normal Administrative Policies Would Prevail.

M. Placement & Follow-up Procedures Would Be Included.

EXPLANATORY NOTE:

In the example selected - no true day to day modification is necessary. The student role is proactive in the mainstream of the class. The modification is in the mode of presentation of material and in the testing techniques.

PERSONNEL ADMINISTRATION

Individual Student Rx

I. Student involved as an Affective Dysfunction problem. Has a history of alcohol and possible drug abuse which he is now trying to conquer. This is presently causing him to have emotional and interpersonal skills problems; especially self-confidence in the areas of speaking and expression of ideas. He tends to become passive and introverted when his ideas are challenged or questioned; or when put into a stress situation.

II. In the area I am teaching, (Business Administration Personnel), these attributes would be highly detrimental since it involves working with people and expressing of ideas.

III. In the assignment, I have assigned some problem questions either from the text or workbook and during the class to ask the student how (s)he would handle the situation. There would be many different routes to take in order to obtain a solution to the problem.

IV. To assist this student, I would break the class up into smaller groups to discuss the question and then present the group's opinion as to the correct solution. I would have the handicapped student present (verbally) his group's discussion. If challenged, the student has the backing of his group and this would instill confidence in him. Hopefully, this would convince the student that he can verbalize and that being challenged is a part of the procedure that is normal. Hopefully, by functioning in a group, he would realize that he as an individual is not being criticized, rather it is the solution that is being challenged.

V. During the discussion I would try to point out the fact that there is no one way but many solutions, similar to which route would you take to get from Wisconsin Rapids to Milwaukee.

VI. Later, I would have the students pair off in two's and handle a different problem. This would be necessary to slowly break the student away from becoming reliant on groups. Eventually, the student would be able to present his ideas on his own.

MODIFYING VOCATIONAL PROGRAM FOR A HANDICAPPED STUDENT

A. The Student:

-good or excellent cognitive skills
-good or excellent affective skills
-psychomotor problem -- a spasticity which greatly hindered writing (cursive)--student able to write legibly but very slowly
-student was able to type proficiently

B. The Course:

-Marketing Principles, which is a required course for all marketing students

C. Problem Area:

-student could function in an acceptable manner except where writing was involved
-student had an excellent chance of obtaining employment goal of telephone/inside sales position
-need area involved overcoming the student's writing difficulty

D. Course Modification:

-course itself did not have to be modified
-modification occurred in how student was evaluated
-when needed, student given access to a typewriter

E. Modification Efforts in Evaluation:

-student was given copies of my prepared lecture notes--this enabled student to "highlight" key points simply with markers rather than write out notes long hand
-from these prepared notes, student had necessary information to complete all projects required

1. papers and other written projects assigned with plenty of advance time to permit student access to a typewriter

2. tests were completed in the following manner

   a) special objective tests such as true-false, fill in the blank, or multiple choice were given in order to minimize writing

   b) if a written essay was desirable, special time arrangments were made so student could gain access of a typewriter to use as an alternative to writing

EXAMPLE 5

ASSIGNMENT I

1. Course: Business Machines

2. Functional Problem: Auditory Problem - (hard of hearing, not deaf)

3. Problem Area: Course materials are presented through audio/visual (slide/tape) presentations

4. Modification: All audio tapes will be sent to our Word Processing Center for transcribing into written form. The written transcripts will be put into notebook format and placed with the slide presentations.

ASSIGNMENT II

1. Course: Business Machines
   Specific Unit: Ten-Key Adding Machine
   Specific Lesson: (AVT Lesson 1, Media Systems) - an introductory tape covering machine parts & correct positioning of the machine on the desk
   Specific Task: Positioning the Ten-Key Adding Machine on the desk
   Material Needed: Ten-Key Adding Machine & Desk Slide/Tape Presentation

2. Functional Problem: Learing Disabled student-slow learner

3. Process: The student will listen to the entire slide/tape presentation. Slide/Tape presentation will be followed by a study guide designed to go along with individual slides. Written materials will be at a very low reading level, possibly containing a "Guided Reading Sequence" or other reading aid for the slow learner. This class is taught on a self-pared basis so no lecture modifications are possible.
   Example: Turn your slide projector on and advance (go forward) to slide 2. Slide 2 shows where the machine should be on the desk. Let's position (put) the machine in the correct (right) place. The first step is to make sure the rows of keys (they have numbers on them) will be facing you. The machine should be slanted (like /) as shown in slide 3. Put your right hand on the keys and see if your arm is comfortable (feels good).

This type of student needs the repetition of seeing the slides twice, and both hearing and seeing the instructions. Going through the process twice is also reinforcing.

After this process, the instructor should check to see that the machine is correctly placed and if it is not, go through an oral explanation and demonstration with the student.

EXAMPLE 6

OBJECTIVE: Unit in Typing I on typing a memo, personal letter, small envelope, and postcard for a student with the use of the left hand only.

PURPOSE: To type a memo, personal letter, small envelop, and postcard in mailable form.

BACKGROUND: Student has mastered: 1) appropriate keyboard for the handicap, 2) use of a correcting device, and 3) use of tape recorder, headset, and slide/tape equipment.

INSTRUCTIONAL TECHNIQUES:

1) Student uses the regular classroom textbook.
2) Each lesson provides practice material to be typed.
3) On a one-to-one basis discuss the lesson objectives with the student and the summary at the end of the lesson.
4) Student views the carrel presentation: and, on a one-to-one basis, review and ask questions.
5) Do the required problems. (These are the first problems in the textbook, so format is more important than perfection.) The second problem of the lesson should be of a better quality than the first.

RATIONALE OF EVALUATION:

1) A feeling of success is important. Up to this time, only words and/or sentences have been typed. Now these are put together into a form used by people .
2) The second problem of each lesson should contain fewer errors. In this first unit if preparing mailable work, no errors are ideal, but may not be realistic.
3) In this initial stage of producing mailable work, proper format is important. The student then sees what "looks good" and is able to see progress.

EVALUATION:

1) Basic math questions as related to spacing on memo, personal letter, postcard, and small envelope.
2) Information typed as part of the address.
3) Salutations and closings.
4) Punctuation.
5) Personal Titles.
6) Signatures.
7) Margins.

A theory evaluation may be written (true/false, multiple choice, or completion) or oral.

A typing evaluation may be provided (the student may be asked to type a postcard or letter to someone they know).

The evaluation may be a combination of both.

MODIFICATION OF TYPING (BEGINNING) FOR STUDENT WITH HEARING IMPAIRMENT OR DEAFNESS

1. Student Handbook for AVT (Audio-Visual-Tutorial) Beginning Typing, 2nd Edition.

2. Script to accompany slide-tape presentations for each lesson (order from Media Systems).

3. Depending on the degree of the hearing loss, student may need an interpreter with him/her for specific portions of the instruction.

4. Modification for the typewriter - one development which we have utilized is a battery-operated light which is activated when the bell rings to indicate the right-margin setting. This was developed by a physically handicapped (wheelchair) person on our staff. It eliminates the need for the student to be looking up at the paper when approaching the end of the line: thus eliminating a bad habit.

5. Since we teach the individualized method, communication problems have been minimized - all testing is done on an individualized basis - when the student is ready for a test, he may take it. Immediate feedback is given. We learned through trial and error that it is important to know if the interpreter understands typing theory and concepts since one-third of the grade is dependent on theory, this is very important. We assumed (don't assume anything!) that in our first encounter that the interpreter knows typing. When the student took theory tests, she failed miserably; until we discovered that the interpreter was unable to explain clearly the test questions. We solved the problem by having one of the instructors sit in on the test and explain confusing items to the interpreter.

6. It is also necessary to have a supply of paper on hand. We have found that many questions can be explained graphically far better than through words. This, of course, is dependent on the student's communication skills.

7. Timed writings pose no problem for us. A nod of the head will indicate the beginning of the timing, and a touch serves to tell the student when the time is up.

8. This type of instruction is, of course, easily adapted for a hearing impaired or deaf student. The pressure is minimized and the student is not forced to go on to another lesson if he is not ready.

9. Grading poses no problem; the student is graded on the same basis as all other students.

10. Since time is not a factor, if the student does not complete the course in a 12-week period, he/she simply re-enrolls and continues at the point he/she left off.

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